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Patient Matters

CHAPTER 15 - NURSING

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NURSE PRACTITIONERS IN NSW (PD2012_026)


PURPOSE

This policy directive supersedes NSW Health PD2005_556 and should be read in conjunction with Nurse Practitioners in NSW Guideline for the implementation of Nurse Practitioner roles within NSW Health.

NSW Health supports the role of the Nurse Practitioner as an important component of healthcare provision in NSW. Nurse Practitioner positions aim to improve access to care and address gaps in existing health care services through flexible and innovative models of care delivery and may therefore enhance service delivery options.

This policy statement and the associated guideline are intended to ensure that:

a) NSW Nurse Practitioner (NP) positions are established and sustained in a consistent manner;

b) Local Health Districts (LHDs) are provided with guidance on the processes required to effectively establish, implement and sustain Nurse Practitioner roles in NSW;

c) Nurse Practitioner positions are supported by a robust governance framework, including support for Transitional Nurse Practitioners (TNPs) preparing for endorsement as a Nurse Practitioner.

This policy reflects changes in both state and federal legislation and changes made by the Nurses and Midwives Board of Australia (NMBA) to the Nurse Practitioner endorsement pathways.

MANDATORY REQUIREMENTS

The following conditions must exist within the LHD to support the Nurse Practitioner position:

1. Establishing Nurse Practitioner Positions

1.1 Positions are established in order to address identified clinical service needs or gaps in existing services for target populations. Nurse Practitioner roles may be implemented within new models of care or may enhance existing services (Guideline section 4).

1.2 Adequate recurrent funding must exist within the context of a service or department to support the position outside of existing nursing workforce requirements, including relevant equipment, resources and funds for ongoing development. Adequate funding must also to be identified to support regrading of current services to include a Nurse Practitioner role.

1.3 LHDs are not obliged to create Nurse Practitioner positions in order to regrade an individual who has been endorsed, commenced relevant study or expressed an interest in becoming endorsed as a Nurse Practitioner.

1.4 The process of establishing positions is guided by principles of collaborative planning, practice, evaluation and succession planning within a multidisciplinary environment (Guideline section 4).
Once the establishment of a position has been approved by the Local Health District (LHD) Director of Nursing and Midwifery (DNM) and as per local recruitment requirements, it is to be advertised in the usual manner.

Where a Nurse Practitioner is not available, an appropriately experienced Registered Nurse (RN) may be employed into the Nurse Practitioner position in a ‘transitional’ role (CNC 2 pay grade) for a conditional period of up to three (3) years while they work toward endorsement as a Nurse Practitioner (Guideline section 5).

The Nurse Practitioner or Transitional Nurse Practitioner is able to practice within a collaborative, clearly articulated model with the support of other health professionals, management personnel and identified executive support (Guideline section 4).

Nurse Practitioners/Transitional Nurse Practitioners report professionally to the facility DNM or Facility/Service manager. In the event a Nurse Practitioner service is located across facilities, the position will report to the LHD DNM. Nurse Practitioners/Transitional Nurse Practitioners may also report operationally to Nurse Managers of the relevant services. Nurse Practitioners/Transitional Nurse Practitioners have a collaborative professional relationship with Nursing Unit Managers and Nurse Managers.

Organisational support is to exist which ensures the Nurse Practitioner service is able to develop and function as required including indirect clinical time, clinical supervision and mentorship arrangements, study leave and IT support (Guideline sections 4 & 8).

Indirect clinical time is to be included within Nurse Practitioners/Transitional Nurses rostered hours. For single full time positions, indirect clinical time available must not be less than eight hours per fortnight with pro rata equivalent for part time. Services involving more than three positions may consider a rotational arrangement (Guideline section 8).

Within each LHD nursing and midwifery directorate or equivalent, there is to be a Nurse Practitioner Co-ordinator portfolio. This portfolio is allocated to a suitably resourced Nurse Manager or Nurse Practitioner (Guideline section 4.2).

Endorsed Nurse Practitioners within the public health system must not utilise the authority and title of this endorsement including the legislated extensions to clinical practice unless employed in a Nurse Practitioner position.

Nurse Practitioners are to lead evaluation of the service delivery against the key indicators identified in the initial needs analysis and or business case (Guideline section 12).

Requirements for registered nurses enrolling in courses leading to endorsement as a nurse practitioner

NSW Health employees wishing to enrol in university courses leading to endorsement as a Nurse Practitioner must obtain approval from the DNM of the employing facility prior to enrolment in order to ensure indemnity arrangements apply. Evidence of approval is supplied by the DNM/Service/Facility manager of the employing facility or service directly to the education provider (Guideline section 6).

Supervision of clinical practice is provided by appropriately experienced, qualified and supportive supervisors and mentors (Guideline section 6.1).
2.3 These requirements apply to all RNs wishing to enrol in degree courses leading to endorsement as a Nurse Practitioner.

3. Scope of practice

3.1 A scope of practice (ScOP) document is developed by the Nurse Practitioner/Transitional Nurse Practitioner in collaboration with the Multidisciplinary Support Committee (MDSC) at the local level within six (6) months of the position being established or filled (Guideline section 7).

3.2 For a Nurse Practitioner/Transitional Nurse Practitioner in a designated position, the ScOP is developed and agreed at the local level by the MDSC, once signed by the chair of the MDSC it becomes the operational document and is forwarded to the LHD DNM and CE for acknowledgement.

3.3 The ScOP is to be consistent with the expertise and level of competence of the individual.

4. Prescribing arrangements

4.1 The Director-General, in accordance with s17a of the Poisons and Therapeutic Goods Act 1966, has approved a list of poisons, restricted substances and drugs of addiction as the NSW Nurse Practitioner formulary. This list reflects the national formulary approved for Nurse Practitioner prescribing listed on the Pharmaceutical Benefits Schedule (PBS) but does not infer the ability to prescribe these as PBS subsidised items (Guideline 10.6).

4.2 The NSW Nurse Practitioner formulary will be updated from time to time as required to include other poisons, restricted substances and drugs of addiction to reflect expanding scopes of practice (Guideline section 10.1).

4.3 Nurse Practitioners employed by NSW Health are therefore authorised to prescribe, use, possess or supply, in line with their scope of practice, those poisons, restricted substances and drugs of addiction included on the NSW Nurse Practitioner formulary.

4.4 A separate formulary for each Nurse Practitioner approved at the local level is not required if all items to be prescribed are included in the NSW Nurse Practitioner Formulary (Guideline section 10.1).

4.5 Poisons, restricted substances and drugs of addiction a Nurse Practitioner may wish to prescribe not included in the NSW NP formulary must be specified and approved separately. These are collated into an appended formulary to be forwarded by the LHD DNM for approval by the LHD CE (Guideline section 10.2).

4.6 Nurse Practitioners and Transitional Nurse Practitioners should develop a list of preferred medications (P Drugs) which is consistent with the ScOP. P Drugs do not require approval at a local level to be independently prescribed by Nurse Practitioners as long as they are consistent with the approved NSW Nurse Practitioner or an appended formulary (Guideline section 10.4).

4.7 Nurse Practitioners practicing in a community setting may issue prescriptions for medications subsidised by the PBS. Nurse Practitioners practicing in NSW public hospitals must not issue prescriptions for medications to be subsidised by the PBS for inpatients (or those to be discharged), emergency or outpatients (Guideline section 10.6).
4.8 Nurse Practitioners must adhere to LHD policy along with all State and Commonwealth law in relation to prescribing, including the requirements to have collaborative arrangements in place in order to prescribe PBS medications. Nurse Practitioners have a professional and legal obligation to ensure that they prescribe within their ScOP.

5. Provision of MBS services

5.1 Nurse Practitioners employed in localities granted an exemption as part of the Section 19(2) Exemptions Initiative may apply for a MBS provider number and therefore provide eligible services (Guideline section 11.1).

5.2 In order to provide MBS subsidised services Nurse Practitioners must ensure they have collaborative arrangements in place in accordance with the National Health (Collaborative arrangements for nurse practitioners) Determination 2010 (Guideline section 9.6).

IMPLEMENTATION

Chief Executives, Health Service Executives, Managers

- Support the implementation of Nurse Practitioner services by including the role in service planning as appropriate;
- Lead the service needs analysis and formation of the business case as part of the Multidisciplinary Support Committee (MDSC) (Guideline 4.4);
- Assist in ensuring positions are fully operational by facilitating prompt endorsement of approved business cases and appended formularies as appropriate;
- Assign responsibility, personnel and resources to implement this policy;
- Ensure that funding sources for Nurse Practitioner roles are resolved prior to the recruitment process;
- Provide line managers with support to mandate this policy in their areas;
- Ensure that local protocols are in place in each facility to support implementation.

LHD Director of Nursing and Midwifery in addition to above

- Demonstrate leadership in identifying opportunities for implementation of the Nurse Practitioner role within service planning;
- Identify and support an appropriately resourced Nurse Manager or Nurse Practitioner to undertake the role of LHD NP Coordinator.

Facility DON

- Facilitate and process the application for organisational support required for entry into courses leading to endorsement as a Nurse Practitioner;
- Ensure that funding sources for Nurse Practitioner roles are resolved prior to recruitment process;
- Demonstrate leadership in identifying opportunities for implementation of the Nurse Practitioner role within service planning;
- Lead and participate in the service needs analysis, formation of the business case and position description as part of the MDSC;
- Demonstrate leadership in the implementation of Nurse Practitioner services by identifying opportunities to develop services, supporting Nurse Practitioners/Transitional Nurse Practitioners within senior nursing forums and engaging with key stakeholders to ensure role development and sustainability.
Hospital, facility, clinical stream, non clinical and unit managers, Heads of Departments, Nurse Managers, Nursing Unit Managers

- Work collaboratively with the Nurse Practitioner/Transitional Nurse Practitioner and MDSC in the implementation and evaluation of Nurse Practitioner services,
- Lead and participate in the service needs analysis, formation of the business case and position description as part of the MDSC as appropriate.

Nurse Practitioners/Transitional Nurse Practitioners

- Work collaboratively within the organisation to implement and evaluate Nurse Practitioner services;
- Participate in the service needs analysis, formation of the business case and position description as appropriate as part of the MDSC;
- Ensure ScOP is developed within specified timeframes;
- Ensure legal and professional obligations are met in relation to the provision of MBS and PBS services;
- Ensure legal and professional obligations are met in relation to prescribing requirements;
- Identify learning needs and objectives in line with education requirements and the model of care and ensures supervised practice to achieve these;
- Ensure requirements for endorsement as a Nurse Practitioner are met within specified time frames;
- With executive support, lead evaluation of the service delivery against the key indicators identified in the initial needs analysis and or business case;
- Ensure practice remains appropriately supervised during transitional period and otherwise as required.

Registered Nurses seeking to enrol in courses leading to endorsement as a Nurse Practitioner

- Secure formal approval to undertake the clinical practicum requirements while employed by NSW Health from the DNM of employing facility prior to enrolment;
- Ensure adequate information is provided to stakeholders regarding the required commitment to supervision of clinical practice;
- Ensure practice remains appropriately supervised during clinical practicum;
- Ensure practice outside of clinical practicum does not extend beyond the boundaries of the ScOP for which employed.

For further information related to this policy or any other assistance, please contact the Principal Advisor, Nurse Practitioner Project in the Nursing and Midwifery Office on (02) 9391 9490.

NURSE PRACTITIONERS IN NSW – GUIDELINE FOR IMPLEMENTATION OF NURSE PRACTITIONER ROLES – NSW HEALTH (GL2012_004)

PURPOSE

This guideline has been developed to support implementation of PD2012_026 Nurse Practitioners in NSW.

KEY PRINCIPLES

- Nurse Practitioner positions are established to address gaps in service delivery for target populations by introducing new flexible and innovative models of care or by complementing existing services.
- The establishment and implementation of Nurse Practitioner services is guided by a consistent process within supportive and collaborative environments.
Nurse Practitioners and Transitional Nurse Practitioners are supported by robust clinical governance frameworks.

Nurse Practitioner services are evaluated within a multidisciplinary environment to ensure needs of target populations are met and opportunities to expand or improve services occur.

**USE OF THE GUIDELINE**

Whilst a summary of relevant legislation is provided, it is essential that this guideline is understood along with the standards, codes, regulations and any additional legislation relevant to Nurse Practitioners at both the State and Commonwealth level. These include but are not limited to the National Competency Standards for the Nurse Practitioner, Nursing and Midwifery Board of Australia (NMBA) Safety and Quality Framework for Nurse Practitioners and the Registration Standard for endorsement of Nurse Practitioners.

This guideline has been prepared to assist stakeholders to establish, implement and evaluate Nurse Practitioner positions in a consistent manner across NSW by informing:

- Organisations considering implementation or expansion of Nurse Practitioner services.
- Nurse Practitioners.
- Registered Nurses (RNs) employed into Nurse Practitioner positions (Transitional Nurse Practitioners) while working toward Nurse Practitioner endorsement by the Nursing and Midwifery Board of Australia (NMBA).
- RNs employed by NSW Health wishing to enrol in courses leading to endorsement as a Nurse Practitioner.
- Education providers enrolling students employed by NSW Health into courses leading to endorsement as a Nurse Practitioner.

**Organisations should use this guideline to:**

- Identify and define gaps in the current service provision and ensure that Nurse Practitioner roles are established and equipped to address these (Guideline section 4).
- Enable and support a structured, collaborative process for establishing, implementing and evaluating the role or service effectively (Guideline section 4).
- Enable and support formal arrangements for supervision of clinical practice.
- Identify clear roles and responsibilities in establishing, implementing and supporting Nurse Practitioner roles.
- Ensure clinical governance frameworks are in place including robust clinical supervision arrangements, mentorship opportunities, evaluation processes and performance appraisal (Guideline section 6.1).
- Ensure decisions regarding model of care and scope of practice (ScOP) are able to be made collaboratively at a local level by the Multidisciplinary Support Committee (MDSC) to enable a flexible and responsive model of care (Guideline section 4.3).
- Ensure Nurse Practitioner roles are implemented in line with PD2012_026 Nurse Practitioners in NSW.

**Nurse Practitioners should use this guideline to:**

- Work collaboratively within the organisation to develop, implement and evaluate flexible, innovative Nurse Practitioner models of care.
- Develop a ScOP reflective of individual expertise and competence that supports prescribing practice (Guideline section 7).
- Ensure ScOP is aligned with intended model of care delivery.
- Identify learning objectives in order to satisfy educational requirements, support ongoing continuing professional development (CPD), maintain competence, enable and expand ScOP as appropriate.
Lead multidisciplinary evaluation of Nurse Practitioner role/service (Guideline section 12).

Transitional Nurse Practitioners should use this guide to:
- Collaborate to ensure organisational support, including clinical supervision requirements, are in place upon commencement and are sustained throughout the transitional period (Guideline section 5).
- Work collaboratively within the organisation to develop, implement and evaluate flexible, innovative Nurse Practitioner models of care.
- Develop a ScOP document reflective of individual expertise and competence that supports supervised advanced practice (Guideline section 7).
- Work collaboratively to identify and meet learning needs.
- Ensure ScOP is aligned with intended model of care delivery.
- Ensure educational and endorsement requirements are met within agreed timeframes (Guideline section 3).
- Lead and or participate in multidisciplinary evaluation of Nurse Practitioner role/service (Guideline section 12).

Registered Nurses wishing to undertake courses of study leading to endorsement as a Nurse Practitioner are to:
- Ensure formal approval is obtained from the DNM of the employing facility prior to enrolling in any course leading to endorsement as a Nurse Practitioner (Guideline section 6).
- Ensure all clinical placement hours are adequately supervised and competencies assessed according to required university standards.
- Ensure practice outside clinical practicum is maintained within the ScOP appropriate to current employment and all advanced practice is appropriately supervised.

NURSING AND MIDWIFERY MANAGEMENT OF DRUG & ALCOHOL ISSUES IN THE DELIVERY OF HEALTH CARE (PD2007_091)

SECTION 1 – INTRODUCTION

The use of drugs and alcohol\(^1\) produces a significant health burden on the Australian community. Issues related to the use of alcohol and psychoactive drugs impact all areas of medicine and health care. The health and economic costs associated with the use of drugs and alcohol is high with the annual cost of drug use in Australia estimated to be $34.4 billion (Collins & Lapsley 2002). Currently, these costs are identified as:
- $21.1 billion – Tobacco
- $7.6 billion – Alcohol
- $6.1 billion – Illicit Drugs

In 1998, just over 23,313 deaths in Australia were attributable to drug use, representing around 18% of all deaths. Of these, the vast majority were owing to tobacco use (19,019), with 3,271 owing to hazardous or harmful alcohol consumption and 1,023 due to illicit drug use (Ridolfo & Stevenson, 2001). Almost 260,000 hospital episodes in 1996-97 were attributable to alcohol, tobacco and other drug use (National Drug Strategy Household Survey, 1999 Release).

Drug and alcohol use can also complicate the management of other health issues of people presenting to health services. Nurses and midwives have long been identified as primary caregivers. In this context they are well positioned to recognise hazardous use and early symptoms of complications from drug and alcohol use and to intervene appropriately (NH&MRC 2001, de Crespigny, 2001, 1996; Goodin, 1997, 1990, Novak and Petch, 1994).

Historically, health professionals have been reluctant to assess patients’ drug and alcohol use or to implement early or brief interventions. The evidence shows that nurses often do not have the requisite knowledge or skills to intervene (de Crespigny, 2001, 1996, Novak and Petch, 1994) even though many acknowledge that such intervention is a legitimate activity (Goodin, 1997). Lack of organisational support for nurses’ and midwives’ management of drug and alcohol issues has also been a traditional barrier to further work in this area (ALAC 2000, Connolly et al, 1998). High staff turnover and difficulty in recruiting staff, especially in rural areas, has also been a barrier to retaining drug and alcohol knowledge and skills.

This policy directive aims to ensure adherence to minimum standards of practice in all health care settings for the assessment and management of all patients, in relation to their drug and alcohol use.

SECTION 2 – TARGET

2.1 Who is this policy for?

This policy applies to the NSW Health Service System, which, for the purposes of this policy, refers to Area Health Services, Statutory Health Corporations (including Justice Health), Affiliated Health Organisations, and NSW Department of Health. It is directed to Directors of Nursing and Midwifery, however titled, Directors of Community Health Services, Directors of Mental Health Services, Nurse Managers, Nursing Unit Managers, Clinical Nurse Consultants, Nurse Educators, Registered Nurses, Midwives, and Enrolled Nurses.

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\(^1\) NSW Health now uses the term ‘drug and alcohol’ for issues related to substance use. Responsibility for policy development for drug and alcohol issues lies with the Mental Health and Drug & Alcohol Office, except for tobacco related harm. Responsibility for policy development for the latter lies with Tobacco and Health Branch.
2.2 Background

The NSW Strategic Plan – Nurse Education and Nursing Management of Alcohol and Other Drugs (here referred to as ‘the Strategic Plan’) was released in 1991 by the NSW Department of Health. This plan was reviewed and updated into ‘Framework for Progress 2000-2003’ and the ‘Clinical Guidelines for Nursing Practice 2000 -2003’. This initial Strategic Plan was effective in highlighting the need for clinical policy and nursing and midwifery education on drug and alcohol issues.

In 1996, the NSW Nursing Project – Alcohol and Other Drugs was established to review the Strategic Plan. As part of this review, the project group carried out a major survey of all NSW public hospitals and community health centres to determine the level of implementation achieved since the release of the Strategic Plan.

The 1995/96 Survey of Activities Related to the NSW Strategic Plan for Nurse Education and Nursing Management of Alcohol and Other Drugs results indicated that while many aspects of the Strategic Plan had been adopted in NSW hospitals and community health centres, there was room for improvement in its implementation.

The Survey also highlighted that local health service drug and alcohol policy varied between hospitals and was not well integrated. The continued variance of policy and education frameworks was problematic for nursing and midwifery staff across NSW.

This policy is accompanied by the ‘Clinical Guidelines for Nursing and Midwifery Practice in NSW: Identifying and Responding to Drug and Alcohol Issues’.

2.3 Aims of the policy

The aim of this policy is to ensure effective and comprehensive assessment and clinical management of patients who are affected by their use of drugs and alcohol. The focus of nursing and midwifery practice is to give equal regard to both the physical and psychological safety of the patient. All nursing and midwifery practice should aim to reduce harm and improve health outcomes for patients who are at risk due to their drug and alcohol use.

2.4 General Principles

Contact with patients who have been using drugs and alcohol may occur in a variety of health care settings such as community or hospital based services, general health or specialised health facilities. Regardless of the context, management of patients with drug and alcohol issues must be integrated into the care planning for each patient. All practices must be consistent with this directive.

At a minimum, each Health Service/facility must recognise and ensure that:
1. Access to comprehensive health care is an individual’s right. This right should not be impaired by any health professional’s value judgements about the use of alcohol or drugs.
2. All staff are encouraged to have a positive approach to working with patients with drug and alcohol issues.
3. There is a balanced range of interventions available for the management of patients with drug and alcohol issues.
4. Staff are aware of, and have easy access to, written policy and clinical guidelines for intervention and management of patients with drug and alcohol issues.

5. Staff are proficient in performing standardised procedures and implementing protocols for the assessment, management and referral of patients identified as using drugs and alcohol at hazardous or harmful level. The skills required to manage patients with drug and alcohol issues are core clinical skills and should be reviewed and updated on a regular basis.

6. Staff receive appropriate education on:
   - Varied presentations related to drug and alcohol use;
   - Assessment, management and referral of patients identified as using drugs and alcohol at hazardous and harmful levels;
   - Implementation of clinical guidelines to support appropriate management and care of patients with drug and alcohol issues.

7. The needs of children and adolescents, older people, Aboriginal and Torres Strait Islander people, people from culturally and linguistically diverse backgrounds, and gay, lesbian or transgender groups are addressed in a clinically and culturally appropriate manner by all staff.

8. Clear response procedures are in place for services and agencies that frequently require support or refer patients who are using drugs and alcohol at a hazardous or harmful level.

### 2.5 Policy Principles (Clinical)

1. Assessment of all drug and alcohol use is part of the overall nursing and midwifery assessment for each individual.

2. All episodes of care provide an opportunity for the patient to gain health information and insight into issues related to their drug and alcohol use, and for clinical staff to intervene appropriately.

3. Signs and symptoms of intoxication are accurately identified, recorded and are managed to reduce the risk of overdose and further complications from drug and alcohol use.

4. Nursing and midwifery care planning will incorporate effective strategies for the monitoring and management of all withdrawal syndromes.

5. NSW Department of Health and Health Services will endeavour to achieve a high level of knowledge and skill among nursing and midwifery staff. Knowledge and skill is to be developed and maintained in line with current clinical guidelines for best practice for managing drug and alcohol issues.

### 2.6 Key stakeholder responsibilities

Responsibility for implementing this policy directive rests at all levels of the health system - from statewide bodies to individual nurses and midwives in local health facilities. For nurses and midwives within NSW to achieve the aims and principles outlined in this document, it is essential to identify the roles and responsibilities of the key stakeholders.
Role of NSW Department of Health

NSW Department of Health provides leadership and organisational support for Health Services to implement the strategies contained in this document. This support will include:

1. Ensuring that this policy directive and the accompanying *Clinical Guidelines for Nursing and Midwifery Practice in NSW: Identifying and Responding to Drug and Alcohol Issues* are regularly reviewed and updated to reflect best practice;

2. Ensuring that performance agreements between NSW Department of Health and Health Services incorporate the principles and strategies contained in this document and the accompanying *Clinical Guidelines*;

3. Monitoring and evaluating nursing and midwifery management of drug and alcohol issues across NSW;

4. Monitoring and evaluating education on drug and alcohol issues across NSW;

5. Working with nurse and midwife education providers and the Nurses and Midwives Board NSW to enable accurate and consistent curricula on drug and alcohol issues;


Role of Health Services

Health Services must provide leadership and support for nursing and midwifery management of drug and alcohol issues at a local level. They must be largely responsible for implementation of the principles and strategies contained in this document and the accompanying *Clinical Guidelines*. Health Services responsibilities will include:

1. Adoption of nursing and midwifery management of drug and alcohol issues as a high priority across all Health Services facilities;

2. Implementation of consistent and appropriate protocols on nursing and midwifery management of drug and alcohol issues across all Health Services facilities;

3. Implementation of a consistent and appropriate nursing and midwifery education policy on drug and alcohol issues across all Health Services facilities;

4. Regular monitoring of the delivery and quality of nursing and midwifery management of drug and alcohol issues across all Health Services facilities;

5. Regular monitoring of the delivery and quality of nursing and midwifery education on drug and alcohol issues across all Health Services’ facilities; and

6. Adequate allocation of funding to support all the above.
Role of nurse managers and midwife managers

Nurse managers and midwife managers are key agents in the successful adoption and supervision of best practice in the delivery of all clinical care. It is therefore essential that these managers take a key role in the implementation of the Clinical Guidelines at a unit level, and to monitor and support nursing and midwifery education and training at this level. Nurse manager and midwife manager responsibilities will include:

1. Adopting a policy on nursing and midwifery management of drug and alcohol issues as a high priority within the unit;
2. Ensuring awareness and implementation of the Clinical Guidelines within the unit;
3. Ensuring adequate levels of education on drug and alcohol issues within the unit;
4. Regular monitoring of delivery and quality of nursing and midwifery management of drug and alcohol issues within the unit;
5. Regular monitoring of delivery and quality of nursing and midwifery education on drug and alcohol issues within the unit; and
6. Management of unit funding to support the above.

Role of registered nurses, midwives and enrolled nurses

All registered nurses, midwives and enrolled nurses in NSW are responsible for adhering to the principles outlined in this document and for clinical expertise according to the accompanying Clinical Guidelines.

Registered nurse and midwife responsibilities will include:

1. Understanding and appropriate implementation of policies and protocols governing the management of drug and alcohol issues;
2. Awareness of the Clinical Guidelines for Nursing and Midwifery Practice in NSW: Identifying and Responding to Drug and Alcohol Issues;
3. Inclusion of drug and alcohol history in routine patient assessment;
4. Knowledge of the pharmacological effects of drug and alcohol. Understanding of drug and alcohol dependence and its bio-psycho-social consequences;
5. Recognition of issues for care planning arising from assessment data;
6. Provision of interventions for patients identified as using drugs and alcohol at hazardous or harmful levels;
7. Provision of relevant patient education regarding drug and alcohol use supported by information resources and specialist/service referral as necessary;
8. Recognition of signs and symptoms of intoxication, overdose and withdrawal syndromes and implementation of nursing and midwifery strategies to respond to these states; and

Enrolled nurse responsibilities will include:
1. Understanding and appropriate implementation of policies and protocols governing management of drug and alcohol issues;
2. Awareness of the Clinical Guidelines for Nursing and Midwifery Practice in NSW: Identifying and Responding to Drug and Alcohol Issues;
3. Assistance with drug and alcohol history taking in routine patient assessment;
4. Knowledge of the pharmacological effects of drugs and alcohol. Awareness of drug and alcohol dependence and its bio-psycho-social consequences;
5. Recognition of issues for care planning arising from assessment data;
6. Facilitation of intervention for patients identified as using drugs and alcohol at hazardous or harmful levels;
7. Provision of relevant drug and alcohol information resources as necessary;
8. Recognition of signs and symptoms of intoxication, overdose and withdrawal syndromes and implementation of nursing and midwifery strategies to respond to these states; and

Participation in continuing professional development on drug and alcohol issues.
### ASSESSMENT

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| Assessment of all drug and alcohol use is part of the overall nursing and midwifery assessment for each individual patient. | • Assessment includes a record of the quantity and frequency of drug and alcohol use.  
• Drug and alcohol use is recorded including prescribed medication, non-prescribed pharmaceuticals.  
• Assessment includes:  
  - type of drug  
  - dose, frequency and duration of use  
  - time and amount of last dose  
  - route of administration. | • Nursing and midwifery staff have an understanding of the clinical implications of drug and alcohol intake.  
• Nursing and midwifery care management strategies are clearly defined in relationship to overall clinical care.  
• Nursing and midwifery care is planned to address the physical and psychological needs of the patient.  
• Patients do not feel stigmatised for drug and alcohol use as this assessment is not done selectively. |

### Responsibility
- Health Services
- Directors of Nursing and Midwifery (however titled)
- Directors of Community Health Services
- Directors of Mental Health Services
- Senior Nurse Managers and Midwifery Managers
- Nursing Unit Managers and Midwifery Unit Managers
- Clinical Nurse Consultants, Clinical Midwifery Consultants, Nurse Educators and Midwifery Educators
- Registered Nurses, Enrolled Nurses and Midwives
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<td>Nurses and midwives realise opportunities to intervene with all patients regarding their drug and alcohol use</td>
<td>• Education of all nursing and midwifery staff in appropriate intervention strategies related to the use of drugs and alcohol.</td>
<td>• Nursing and midwifery staff develop clinical drug and alcohol skills that enhance patient outcomes.</td>
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| As part of regular, standard clinical practice, nurses and midwives intervene with any patient who is identified as using drugs and/or alcohol at a harmful or hazardous level. | • Provision of resources in the form of pamphlets and other written materials and relevant education material to assist nursing and midwifery staff with appropriate interventions.  
• Provision of information regarding specialist drug and alcohol services to all nursing and midwifery staff. | • Patients are informed of the health risks associated with drug and alcohol use.  
• Patients have increased access to information to help reduce or cease drug and alcohol use where appropriate, and about safe use and associated health effects;  
• Patients have increased access to information about treatment options, resources and referral networks. |

**Responsibility**

- Health Services  
- Directors of Nursing and Midwifery (however titled)  
- Directors of Community Health Services  
- Directors of Mental Health Services  
- Senior Nurse Managers and Midwifery Managers  
- Nursing Unit Managers and Midwifery Unit Managers  
- Clinical Nurse Consultants, Clinical Midwifery Consultants, Nurse Educators and Midwifery Educators  
- Registered Nurses, Enrolled Nurses and Midwives
## INTOXICATION & OVERDOSE

<table>
<thead>
<tr>
<th>Policy Statement</th>
<th>Strategies</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td>Signs and symptoms of intoxication are accurately identified and managed to reduce the risk of overdose and further complications from drug and alcohol intake.</td>
<td>▪ Comprehensive recording of recent drug and alcohol intake from individual or accompanying persons.&lt;br&gt;▪ Assessment of physical signs, mental status and level of consciousness.&lt;br&gt;▪ Other reasons for presentation that may mimic intoxication (e.g. Hypoglycaemia, head injury) are excluded.&lt;br&gt;▪ Monitoring tools, (Glasgow Coma Scale), breathalyser units or BAL are used, where available.&lt;br&gt;▪ Vital signs are observed and recorded.&lt;br&gt;▪ Nursing and midwifery management is aligned to outcomes of observations.</td>
<td>▪ Nursing and midwifery staff have a clear understanding and knowledge of the signs and symptoms of intoxication and overdose.&lt;br&gt;▪ Nursing and midwifery staff plan nursing or midwifery management according to signs and symptoms recorded.&lt;br&gt;▪ Nursing and midwifery staff provide early identification of complications related to intoxication.&lt;br&gt;▪ Risk of progression to overdose is reduced.&lt;br&gt;▪ Patient and staff safety is maintained.&lt;br&gt;▪ Morbidity and mortality is reduced.&lt;br&gt;▪ Nursing and midwifery staff carry out appropriate referral for concurrent or conjoint treatment.</td>
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### Responsibility
- Health Services
- Directors of Nursing and Midwifery (however titled)
- Directors of Community Health Services
- Directors of Mental Health Services
- Senior Nurse Managers and Midwifery Managers
- Nursing Unit Managers and Midwifery Unit Managers
- Clinical Nurse Consultants, Clinical Midwifery Consultants, Nurse Educators and Midwifery Educators
- Registered Nurses, Enrolled Nurses and Midwives
## WITHDRAWAL MANAGEMENT

<table>
<thead>
<tr>
<th>Policy Statement</th>
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<tr>
<td>Nursing and midwifery care planning will incorporate effective strategies for the monitoring and management of all withdrawal syndromes</td>
<td>▪ Assessment and identification of indicators of risk of withdrawal</td>
<td>▪ Nursing and midwifery staff develop knowledge and skill in the recognition of withdrawal symptoms and associated clinical management.</td>
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<td></td>
<td>▪ Observation for signs of withdrawal as clinically indicated.</td>
<td>▪ Nursing and midwifery staff effectively manage withdrawal states.</td>
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<td></td>
<td>▪ Detailed documentation including the use of appropriate withdrawal scales (Alcohol Withdrawal Scale, CIWA-AR Scale, Modified Finnegan’s Chart).</td>
<td>▪ Risk of patient progressing to a severe withdrawal syndrome is minimised with access to effective clinical care.</td>
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<tr>
<td></td>
<td>▪ Early identification of changes in clinical condition and institution of appropriate nursing and midwifery management strategies.</td>
<td>▪ Opportunities for intervention and further treatment are enhanced, and complications are minimised.</td>
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<td></td>
<td>▪ Monitoring of fluid and nutritional intake.</td>
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<td></td>
<td>▪ Maintenance of patient and staff safety.</td>
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### Responsibility

- Health Services
- Directors of Nursing and Midwifery (however titled)
- Directors of Community Health Services
- Directors of Mental Health Services
- Senior Nurse Managers and Midwifery Managers
- Nursing Unit Managers and Midwifery Unit Managers
- Clinical Nurse Consultants, Clinical Midwifery Consultants, Nurse Educators and Midwifery Educators
- Registered Nurses, Enrolled Nurses and Midwives
EDUCATION

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<tr>
<td>NSW Dept. of Health and Health Services will work with educational institutions and professional bodies to ensure a high level of knowledge and skill among nursing and midwifery staff. Knowledge and skill is to be developed and maintained in line with current clinical guidelines for best practice for dealing with drug and alcohol issues.</td>
<td>1. Core curricula within nurse and midwife education to include knowledge and clinical skills in the management of drug and alcohol issues. 2. Education frameworks within Health Services reflect knowledge and clinical skills in nursing and midwifery management of drug and alcohol issues. 4. Support for curriculum development for all speciality courses and training to include relevant education in clinical management of drug and alcohol issues. 7. All education and orientation programs to address attitudinal issues which may impair assessment and appropriate intervention.</td>
<td>3. Nurses and midwives have an understanding of the key concepts and principles underpinning quality care for patients with drug and alcohol related illness and injury. 5. Nursing and midwifery staff have an awareness of the physical and psychological effects of drug and alcohol use. 6. Nursing and midwifery staff have knowledge and skills, commensurate with their roles, in the effective management of drug and alcohol presentations. 8. Nursing and midwifery staff intervene appropriately, regardless of their own attitudes and beliefs in relation to drug and alcohol use.</td>
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Access to comprehensive health care is an individual’s right. This right should not be impaired by any health professional’s value judgements about the use of alcohol or drugs.

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<th>Responsibility</th>
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<tr>
<td>• Registered Nurses, Enrolled Nurses and Midwives</td>
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</tbody>
</table>
Bibliography

Alcohol Advisory Council of New Zealand (ALAC) 2000, Newsletter of the Alcohol Advisory Council of New Zealand, vol. 1, no.4, p.14

Connolly, K, Clark, C, King, T & Roeg, S (1998) Training and Support Services for Nurses Turning Point Alcohol and Drug Centre Inc.


NURSING AND MIDWIFERY CLINICAL GUIDELINES – IDENTIFYING & RESPONDING TO DRUG & ALCOHOL ISSUES (GL2008_001)


64(2/08)
STATE-WIDE NURSE ADMINISTERED THROMBOLYSIS (NAT) PROTOCOL FOR ST ELEVATION MYOCARDIAL INFARCTION (STEMI) (PD2015_044)

PURPOSE
This Policy Statement outlines the mandatory requirements for implementation and utilisation of the state-wide Nurse Administered Thrombolysis (NAT) protocol.

NAT is part of the NSW State Cardiac Reperfusion Strategy (SCRS) which aims to improve the care of patients with an Acute Coronary Syndrome (ACS) and reduce the time to reperfusion for patients with ST Elevation Myocardial Infarction (STEMI). Patients are assessed for access to best practice primary Percutaneous Coronary Intervention (PCI), or thrombolysis. The SCRS increases the likelihood that early reperfusion is available to all patients, regardless of their geographical location or presentation pathway.

The SCRS includes:

- Pre-hospital Assessment for Primary Angioplasty (PAPA): for ambulance patients within a 45 minute safe travel time radius of a designated 24 hour Primary Angioplasty facility
- Pre Hospital Thrombolysis (PHT): protocol directed, paramedic administered early reperfusion option for ambulance patients who are unable to access timely primary PCI in regional and rural settings
- Nurse Administered Thrombolysis (NAT).

The NAT protocol authorises a Registered Nurse (RN), who has successfully completed the requisite NAT education and accreditation package, to assess the suitability of patients to receive NAT which includes the administration of aspirin (if not already given) clopidogrel, tenecteplase, and enoxaparin, using approved standing orders. Eligible patients for the NAT protocol are those with an STEMI confirmed by the ECG Reading Service attending a rural or remote hospital with no immediate onsite access to a medical officer at the time of patient presentation.

MANDATORY REQUIREMENTS

The NAT protocol is only for the management of patients with STEMI confirmed by the ECG Reading Service and who meet all NAT criteria.

The protocol is only to be used in facilities that have fully implemented the NAT protocol and when there is no medical officer on site at the time of presentation.

The protocol is only to be used by RNs accredited in NAT processes and procedures.

Facilities must implement appropriate governance, including procedures to ensure counter signature by the medical officer on call within 24 hours, as per local procedures, identify and minimise the risks of adverse events, and to approve the relevant protocols.

In accordance with NSW Health Policy Directive - Medication Handling in NSW Public Health Facilities (PD2013_043), NAT standing orders must be in the form of a written instruction, signed and dated by the authorising senior medical officer and approved by the local drug and therapeutics committee to enable the administration of NAT medications without a patient specific written order.

Each standing order must be reviewed every 12 months and re-approved as appropriate.

Activation of the NAT protocol occurs in parallel with notification of the local medical officer on call. It is not the intention of a NAT protocol to bypass or exclude the local medical officer; rather it allows appropriate treatment to be commenced while awaiting their arrival. On arrival, the medical officer assumes responsibility for the medical management of the patient, in collaboration with nursing staff.
Medication administration must be as per NSW Health Policy Directives - *Medication Handling in NSW Public Health Facilities (PD2013_043) and High Risk Medicines Management (PD2015_029)*. RNs administering NAT must have successfully completed the requisite education and accreditation packages which include:

- NAT education and accreditation package
- Competency in basic cardiac rhythm and basic 12 lead ECG interpretation
- Advanced Life Support (ALS) certification that includes; life threatening arrhythmia recognition, manual and/or automated defibrillation and use of ALS drugs
- Certification in peripheral intravenous (IV) cannulation.

**IMPLEMENTATION**

The NSW Ministry of Health is responsible for:
- Providing the mandatory requirements and standards to support implementation of the policy
- Evaluate implementation of the policy by Public Health Organisations.

The Agency for Clinical Innovation is responsible for:
- Supporting implementation and education.

The Clinical Excellence Commission is responsible for:
- Supporting implementation of the policy where applicable to medication safety.

Chief Executives, Health Service Executives, Managers are responsible for:
- Assigning responsibility, personnel and resources to implement the policy as locally appropriate
- Providing line managers with support to implement the policy in their areas
- Ensuring that local policies, protocols and procedures are in place at each facility to support implementation of the policy
- Evaluate effectiveness of implementation and report compliance with the policy to NSW Ministry of Health as required.

Drug and Therapeutics Committees are responsible for:
- Approving standing orders
- Provide local oversight of the safe implementation of this policy.

Directors of Clinical Governance are responsible for:
- Collaborating with other Executive members to ensure successful implementation of the policy within the relevant Public Health Organisation.

Registered Nurses (RNs) administering NAT are responsible for:
- Meeting all obligations under the NAT protocol
- Completing requisite education and training and ensuring ongoing competence to administer the medications contained within the NAT protocol
- Documenting all assessments and details relating to the treatment of patients using the NAT protocol
- Completing annual ALS and NAT training and re-accreditation
- Reporting of any incidents involving NAT protocol.

The ECG Reading Service is responsible for:
- Responding to transmitting hospital within 10 minutes of ECG transmission.

The local medical officer “On Call” is responsible for:
- Attending the hospital to review the patient as soon as possible following notification
- Assuming medical management of the patient
- Review, sign and date NAT medication standing orders within 24hours
- Reporting of any incidents involving NAT protocol.

312(14/10/15)

1. BACKGROUND

1.1 About this document
The state-wide protocol authorises an accredited registered nurse (RN) to administer Nurse Administered Thrombolysis (NAT) to adult patients who meet NAT criteria.

1.2 Key definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Antithrombotic medication</td>
<td>Medication which reduces the formation of thrombus; includes enoxaparin and antiplatelet medications; aspirin and clopidogrel.</td>
</tr>
<tr>
<td>CERS Assist</td>
<td>Clinical Emergency Response System Assistance: The provision of urgent additional clinical assistance, by NSW Ambulance paramedics, in response to a rapidly deteriorating patient in a public health care facility, which is requested when a facility requires additional clinical resources. This is not a request for transport.</td>
</tr>
<tr>
<td>ECG Reading Service</td>
<td>ECG interpretation for suspected STEMI provided by senior medical staff e.g. Cardiologist or Emergency Physician to support clinicians in rural and remote sites.</td>
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<tr>
<td>Escalation</td>
<td>The recognition and communication of patient deterioration to a more experienced colleague, followed by an appropriate response by the more experienced colleague.</td>
</tr>
<tr>
<td>Must</td>
<td>Indicates a mandatory action requiring compliance.</td>
</tr>
<tr>
<td>Nurse Administered Thrombolysis (NAT)</td>
<td>Administration of antithrombotic and thrombolytic medication according to protocol by a registered nurse to a patient with a diagnosis of STEMI confirmed by an ECG Reading Service.</td>
</tr>
<tr>
<td>NAT accredited RN</td>
<td>Registered nurse who has successfully completed the requisite education and training to administer anti-thrombotic and thrombolytic medication according to established protocol.</td>
</tr>
<tr>
<td>Person Responsible</td>
<td>Hierarchy of persons from whom the person responsible for a person other than a child or a person in the care of the Director General under section 12 is to be ascertained, in descending order; (a) the persons guardian (b) the spouse (c) a person who has care of the person (d) a close friend or relative. As defined by the Guardianship Act section 33A.</td>
</tr>
<tr>
<td>Should</td>
<td>Indicates obligation, duty or correctness, an action that should be followed unless there are sound reasons for taking a different course of action.</td>
</tr>
<tr>
<td>Telephone order</td>
<td>A medication order given over the telephone by a medical officer.</td>
</tr>
<tr>
<td>Thrombolysis</td>
<td>The dissolution of a blood clot, especially as induced artificially by infusion of an enzyme into the blood.</td>
</tr>
<tr>
<td>Thrombolytic medication</td>
<td>Medication which acts to dissolve blood clots e.g. tenecteplase.</td>
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1.3 Reperfusion models and Nurse Administered Thrombolysis

Reducing the time from symptom onset to cardiac reperfusion for patients with ST Elevation Myocardial Infarction (STEMI) reduces the potential damage to the myocardium which potentially improves patient outcomes.

The NSW State Cardiac Reperfusion Strategy (SCRS) aims to improve the care of all patients with an Acute Coronary Syndrome (ACS) and reduce the time to cardiac reperfusion for patients with STEMI. The strategy increases the likelihood that early reperfusion is available to all patients, regardless of their geographical location or presentation pathway and includes assessment for access to best practice primary Percutaneous Coronary Intervention (PCI), or thrombolysis, with the type of care provided tailored to the setting. Early reperfusion models include:

- Pre-hospital Assessment for Primary Angioplasty (PAPA): for ambulance patients within a 45 minute safe travel time radius of a designated 24 hour Primary Angioplasty facility

- Pre Hospital Thrombolysis (PHT): protocol directed, paramedic administered early reperfusion option for ambulance patients who are unable to access timely primary PCI in regional and rural settings.

Nurse Administered Thrombolysis (NAT) provides a further early reperfusion option for patients in small rural or remote hospitals that do not have 24 hour onsite medical cover.

Patients who call an ambulance may be covered by the PHT model, but for those whose STEMI is not evident prior to arrival in the emergency department (ED); who self-present; or whose symptoms develop during an inpatient stay, NAT provides the option for rapid administration of thrombolysis when there is no medical officer onsite and should be followed by expedited transfer outlined in section 7.

NAT involves the transmission of a 12 lead ECG to an ECG Reading Service for confirmation of STEMI interpretation. If the STEMI is confirmed, there are no contraindications and the patient meets all NAT protocol checklist criteria, the accredited Registered Nurse (RN) is authorised to administer thrombolysis according to the NAT protocol.

The NAT protocol authorises accredited RNs to administer specified doses of thrombolytic and antithrombotic medication (specifically aspirin, clopidogrel, tenecteplase and enoxaparin), following screening and assessment of the patient’s suitability and confirmation of a diagnosis of STEMI from the ECG Reading Service, using approved standing orders when there is no medical officer onsite.

A standing order removes the need for a written medication order in the absence of an onsite medical officer. However, where available, the medical officer on call must be immediately notified of the need to attend the hospital and review the patient as soon as possible.

In situations where a medical officer is not available on call, escalation processes or Clinical Emergency Response System Assistance (CERS Assist) must be activated, as per local procedures.

**NB:** if a medical officer is on site, or is directing care as a telephone order the NAT protocol does not apply. Activating a NAT protocol should not be confused with a telephone order.

While any medication can be administered subject to an individual medical telephone order, the development of a robust training and accreditation package for NAT is essential to ensure that RNs are competent to screen and assess the patient for suitability, deliver the required therapy and provide appropriate ongoing monitoring and care prior to medical assessment.
1.4 Legal, regulatory and policy framework

Nurses accredited to utilise the NAT protocol remain accountable for all aspects of their practice. Nurses accredited to implement the NAT protocol do so within the Registered Nurse scope of practice. According to the Nursing and Midwifery Board of Australia (NMBA) - "the extent of a nurse or midwife’s scope of practice is determined by the individual’s education, training and competence. The extent of an individual’s scope of practice is then authorised in the practice setting by the employer’s organisational policies and requirements." 2

Facilities and accredited RNs operating within this protocol must conform to NAT policy and procedures and NSW Health Policy Directive - Medication Handling in NSW Public Health Facilities (PD2013_043), in particular, to points; 7.4: Standing Orders and 7.6: Principles for Safe Medication Administration.

In accordance with NSW Health Policy Directive - Medication Handling in NSW Public Health Facilities (PD2013_043), NAT standing orders must be in the form of a written instruction, signed and dated by the authorising senior medical officer and approved by the local drug and therapeutics committee to enable the administration of NAT medications without a patient specific written order.

Each standing order must be reviewed every 12 months and re-approved as appropriate.

The NAT protocol may be utilised by RNs who have completed the requisite training and accreditation package for NAT which includes:

- Pre requisite requirements:
  - Competency in basic cardiac rhythm and basic 12 lead ECG interpretation
  - Advanced Life Support (ALS) certification - manual and/or automated defibrillation and use of ALS drugs
    - Certification in peripheral intravenous (IV) cannulation
- NAT education and accreditation package

2. INITIAL ASSESSMENT AND IMPLEMENTATION OF PROTOCOL

Nursing staff must follow the process outlined in the NAT treatment pathway in attachment 10.1.

A complete physical assessment must be undertaken on any patients who present with suspected ACS, including 12 lead ECG and vital signs within 10 minutes of presentation as per Australasian College for Emergency Medicine Policy on the Australasian Triage Scale, Acute Coronary Syndromes Clinical Care Standard 2, and initial management as per NSW Health Policy Directive - Chest Pain Evaluation (NSW Chest Pain Pathway) (PD2011_037).

The time of severe sustained symptom onset must be ascertained, as the treatment window for administration of thrombolysis is less than 6 hours after symptom onset under the NAT protocol.

Patients who present within 6 - 12 hours are NOT eligible for thrombolysis under the NAT protocol, but may be suitable for thrombolysis prescribed by a medical officer outside the NAT protocol.

In addition to the patient’s vital signs and ECG, the patient’s age and weight are required to determine the correct dosage of medications to be administered, should the patient meet the NAT screening criteria. If the patient is unable to be weighed then the patient should be asked their weight, or an estimate should be made by nursing staff and documented on the patient’s medication chart.
Following initial assessment and recording of a 12 lead ECG, if the ECG states “MEETS ST ELEVATION MI CRITERIA” and/or “CONSIDER ACUTE INFARCT”, the ECG must be transmitted to the ECG Reading Service to confirm or exclude diagnosis of a STEMI. The ECG transmission must include the time of symptom onset and the patient’s name, age and sex, as the Glasgow algorithm within the Lifepak 15 ECG machine, used at the majority of sites, uses age and sex as part of the analysis of the STEMI pattern.

The local medical officer on call must be notified at this time and informed of the need to attend the hospital to review the patient and undertake further management, until the patient is transferred.

If a response is not received from the ECG Reading Service within 10 minutes of transmission, the ECG MUST be re-transmitted and the ECG Reading Service contacted by telephone to verify that the transmission has been received.

If a STEMI has not been confirmed following initial assessment and ECG transmission, but the patient’s symptoms evolve at any time prior to the medical officer arriving on site, a repeat ECG must be recorded. If the ECG states “MEETS ST ELEVATION MI CRITERIA” and/or “CONSIDER ACUTE INFARCT”, the repeat ECG must be transmitted to the ECG Reading Service to exclude STEMI.

If the patient deteriorates or the nurse is concerned about the patient in any way, local escalation processes must be followed until such time as the on call medical officer arrives and assumes ongoing medical management.

3. PATIENT SCREENING
The NAT patient screening tool (attachment 10.2) must be completed to assess if the patient is suitable to receive thrombolysis. The screening tool must be commenced as soon as possible and completed prior to call back from the ECG Reading Service if possible. Timely screening will ensure that the correct information is available to determine whether the patient is eligible for NAT, thus expediting appropriate treatment.

For a patient to be eligible for NAT there must be NO contraindications to treatment in the screening tool. This means all 14 boxes within the screening tool must be ticked (answered ‘YES’) before initiating the NAT protocol.

If the patient does not meet ALL criteria in the screening tool they are NOT eligible to receive thrombolysis under the NAT protocol. Thrombolysis may still be administered, but this must be at the discretion and under the direction of a medical officer outside of the NAT protocol.

3.1 Inclusion criteria
The patient may be considered for the NAT protocol only if the following criteria are met:

- No medical officer on site at the time of the patient’s presentation
- An RN who is NAT accredited available and second person to check medications, as per local procedures
- ALL criteria met within the NAT screening tool
- The patient has provided verbal consent

3.2 Exclusion criteria

- Any negative response to NAT screening criteria

Patients who present more than 6 hours after symptom onset are automatically excluded from the NAT protocol. This aligns with NSW Ambulance PHT protocol and facilitates standardised practice to reduce the risk of error for ambulance and hospital clinicians that work closely in rural and remote settings.
Patients who present within 6-12 hours of symptom onset with a confirmed STEMI and patients who have a confirmed STEMI but do NOT meet NAT criteria may still be eligible for thrombolysis. However this can NOT occur within the NAT protocol. A separate order for the administration of thrombolysis will be required by the medical officer on call via a written order or telephone order as per NSW Health Policy Directive- Medication Handling in NSW Public Health Facilities (PD2013_043).

Patients who do not have a STEMI confirmed by the ECG Reading Service or do not meet NAT screening criteria MUST continue to be managed as per NSW Health Policy Directive- Chest Pain Evaluation (NSW Chest Pain Pathway) (PD 2011_037) and in consultation with the medical officer on call. This should include a repeat ECG to determine if there are any changes and re determine if the patient’s condition evolves to meet STEMI criteria.

Patients who have contraindications to thrombolysis must have transfer expedited as outlined in section 7.

4. ADMINISTRATION CHECKLIST AND CONSENT

A minimum of two people are required to initiate the NAT protocol, one of which must be an RN who has completed NAT training and accreditation.

The accredited RN must complete and sign the NAT administration checklist and obtain consent from patients who meet the screening criteria. A non accredited second person may check the medications and countersign the medication chart, as per local procedures, but NOT complete the checklist or administer the medications.

The accredited RN must sign to acknowledge the confirmation of STEMI by the ECG Reading Service and agree that the patient meets ALL NAT screening criteria.

If the patient meets all screening criteria, the NAT administration checklist (attachment 10.3) must be completed prior to the administration of medication. ALL responses MUST be ticked ‘YES’ and the relevant sections completed prior to proceeding.

Where a patient does not have capacity for consent the person responsible may give consent on their behalf, as per NSW Health Policy Directive - Consent to Medical Treatment- Patient Information (PD 2005_406) and the NSW Guardianship ACT 1987 No 257.

Interpreter services must be contacted for any non-English speaking patients, as per NSW Health Policy Directive -Interpreters- Standard Procedures for Working with Health Care Interpreters (PD2006_053). It should be noted that telephone interpreter services are available.

The information script within the NAT administration checklist (attachment 10.3) MUST be read exactly to the patient. The patient should be given an opportunity to seek further information if required. If the patient wishes to proceed with treatment the patient’s verbal consent must be obtained prior to activation of the NAT protocol. There is no requirement to obtain the patient’s signature but the accredited RN must sign and date the checklist to acknowledge that they have advised the patient of the benefits and risks and that the patient has given verbal consent to treatment.

Activation of the protocol MUST occur in parallel with notification of the medical officer on call. Once the medical officer arrives, they are to assume responsibility for ongoing medical management of the patient, in collaboration with the nursing staff.

All patients must be managed in an area where there are NAT trained and accredited staff to assess, treat and monitor the patient, such as an ED or close observation unit. Appropriate resuscitation equipment and medications must be available to manage any adverse events. The RN administering tenecteplase should ideally ensure that the patient has two reliable well secured and patent intravenous cannulas in situ.
5. TREATMENT

All patients who present with symptoms suggestive of ACS will receive initial management including aspirin, if not already given or contraindicated, as per NSW Health Policy Directive - Chest Pain Evaluation (NSW Chest Pain Pathway) (PD2011_037). Patients who meet NAT criteria will also receive the following medications as per the NAT protocol:

- Clopidogrel (unless contraindicated)
- Tenecteplase
- Enoxaparin.

If the patient has an allergy or hypersensitivity to aspirin or clopidogrel the NAT protocol should still be enacted, with the omission of these medications and the medical officer advised.

Dosage depends on the patient’s age and weight; clopidogrel dosages MUST be adjusted according to the patient’s age; tenecteplase and enoxaparin dosages MUST be adjusted according to the patient’s weight and age. All medications must be administered as per individual standing orders in attachments 11.1, 11.2, 11.3 and 11.3.1.

Medication must be documented on the medication chart in the “Once only and nurse initiated medicines and pre-medications” section of the medication chart, with the symbol STO, and include the time and dosage given. The medications must be administered by an RN accredited in NAT, according to the NAT standing orders.

Continuous cardiac monitoring must be in place before, during and after administration of thrombolysis.

If the accredited RN applying the protocol and standing orders has any concerns regarding patient safety at any time, the RN must contact the local medical officer on call and escalate as per local procedures.

The record of administration must be countersigned on the patient’s medication chart by the medical officer on call within 24 hours as per local procedures and NSW Health Policy Directive - Medication Handling in NSW Public Health Facilities (PD2013_043).

6. POST THROMBOLYSIS MANAGEMENT

Once the medical officer arrives, they are responsible for ongoing medical management of the patient, in collaboration with the nursing staff. Arrangements must be made for transfer of the patient as soon as possible as outlined in section 7.

All patients who receive thrombolysis must receive continuous cardiac monitoring for at least 24 hours, as per NSW Health Policy Directive- Cardiac Monitoring in Adult Cardiac Patients in Public Hospitals in NSW (PD 2008_055).

The patient’s vital signs; respiratory rate, SpO2, pulse rate and rhythm, blood pressure, neurological status, pain score and temperature should be monitored and documented on the NSW Health Standard Adult General Observation chart every 15 minutes for at least 60 minutes to identify any trends in clinical deterioration. Observations that fall into the Clinical Review or Rapid Response areas must be escalated.

Monitoring includes observation for signs and symptoms of adverse events which may include; allergic reaction, bleeding, haemorrhage of any kind, stroke and reperfusion arrhythmias which may lead to cardiac arrest.

If the patient has ongoing chest pain and no resolution of ST elevation, and the local medical officer has not arrived, escalation of care is to occur in line with local procedures.
Any adverse events must be documented and managed accordingly and escalated as per NSW Health Policy Directive - Recognition and Management of Patients who are Clinically Deteriorating (PD2013_049).

Reperfusion generally occurs within 60-90 minutes following administration of thrombolysis. The patient should be observed for signs of successful thrombolysis therapy suggestive of reperfusion which includes:

- Relief of symptoms
- Restoration of haemodynamic or electrical stability
- Reduction by 50% of initial ST-segment elevation, within 90 minutes of initiation of therapy.

A repeat 12 lead ECG should be recorded at between 60 - 90 minutes after thrombolysis. The ECG must be reviewed by the medical officer on call to determine whether reperfusion has occurred. A repeat ECG should also be recorded and interpreted prior to patient transfer.

7. TRANSFER

Following administration of thrombolysis, the patient needs expedited transfer to a hospital that has emergency PCI facilities and/or a coronary care unit to await angiography, with links to cardiac surgical facilities, as per National Heart Foundation Guidelines 2006.

Patients must be assessed for urgency of transfer in consultation with the medical officer on call and arrangements made as per local procedures and NSW Health Policy Directives - Inter facility Transfer Process for Adults Requiring Specialist Care (PD2011_031) and Critical Care Tertiary Referral Networks and Transfer of Care (Adults) (PD2010_021).

Patients who have contraindications to thrombolysis, or who fail to reperfuse also require expedited transfer.

8. PATIENTS WHO DO NOT HAVE STEMI or DO NOT MEET NAT SCREENING CRITERIA

Patients who do not have a STEMI confirmed or do not meet NAT criteria MUST be managed as per NSW Health Policy Directive - Chest Pain Evaluation (NSW Chest Pain Pathway) (PD 2011_037) and in consultation with the medical officer on call.

Patients who do not initially have a STEMI confirmed by the ECG Reading Service whose symptoms evolve at any time MUST have a repeat ECG taken and transmitted to exclude STEMI and eligibility for the NAT protocol reassessed if the local medical officer is still not on site. In addition, if the nurse is concerned about the patient at any time escalation must occur as per local procedures until such time as the on call medical officer arrives to assume responsibility for ongoing medical management.

9. EVALUATION

Monitoring and evaluation of the outcome of the Nurse Administered Thrombolysis protocol should occur on an ongoing basis at a facility level. This should be in line with state-wide cardiac reperfusion evaluation data and include the minimum dataset for STEMI: reperfusion model as per attachment 12.1 Additional recommended data may also be collected as per attachment 12.2.

10 LIST OF ATTACHMENTS

10.1 Nurse Administered Thrombolysis (NAT) Treatment pathway

10.2 Nurse Administered Thrombolysis (NAT) Patient Screening Tool

10.3 Nurse Administered Thrombolysis (NAT) Administration Checklist
Nurse Administered Thrombolysis (NAT) Standing Orders for Management of ST Elevation Myocardial Infarction:

11 NAT Standing Order Medication Overview

11.1 Clopidogrel

11.2 Tenecteplase (Metalyse®)

11.3 Enoxaparin sodium (Clexane®)

11.3.11 Enoxaparin Subcutaneous (SC) Dosage Table

Minimum data set for STEMI reperfusion model:

12 Mandatory data

12.1 Recommended data
10.1 Nurse Administered Thrombolysis (NAT) Treatment Pathway

Patient Presentation Suspected ACS
Follow ACS Pathway and record ECG

Complete NAT patient screening tool & Transmit ECG to ECG Reading Service

ECG states "MEETS ST ELEVATION MI CRITERIA" and/or "CONSIDER ACUTE INFARCT"

Contact on Call Medical Officer (MO)

Provide additional clinical information to ECG Reading Service Doctor as required including NAT checklist results

Response received from ECG Reading Service Doctor within 10 minutes

YES

NO

Re-transmit ECG Contact ECG Reading Service & speak to senior doctor on site

Administer as per NAT protocol
- Aspirin if not already given
- Clopidogrel
- Tenecteplase
- Enoxaparin

ON Call MO Arrives

Complete NAT administration checklist

YES

NO

Meets NAT criteria

Exit NAT Pathway

Follow Chest Pain Pathway
Await arrival of On Call MO as per local procedures

Transfer

On call MO Signs NAT standing order medications
Responsible for ongoing medical management in collaboration with nursing staff
10.2 Nurse Administered Thrombolysis (NAT) Patient Screening Tool

<table>
<thead>
<tr>
<th>Facility:</th>
<th>Family name</th>
<th>MRN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Given name</td>
<td>Sex: M ⡯ F ⡯</td>
<td></td>
</tr>
<tr>
<td>DOB:</td>
<td>MO:</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nurse Administered Thrombolysis (NAT)

Must be used with suspected Acute Coronary Syndrome (ACS) Pathway

<table>
<thead>
<tr>
<th>Tick YES or NO for each question</th>
<th>YES</th>
<th>NO</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The patient complains of non-traumatic chest pain or other symptoms consistent with acute coronary syndrome/myocardial ischaemia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 The patient confirms sustained symptom onset was less than 6 hours ago</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 The patient is conscious and orientated to time, place and person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Pulse rate is more than 50 bpm and less than 150 bpm, systolic BP is less than 180 mmHg and diastolic BP is less than 110 mmHg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 The patient confirms no previous allergy, hypersensitivity or adverse reaction (including HITTS) to clot dissolving or antithrombotic medications such as tenecteplase, heparin or enoxaparin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 The patient confirms they are not taking warfarin, dabigatran, rivaroxaban, apixaban or any other anticoagulants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antiplatelet medication such as aspirin, clopidogrel, prasugrel and ticagrelor is not a contraindication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHECK PATIENT MEDICATIONS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 The patient confirms no active, suspected or known bleeding tendency or recent blood loss (within 4 weeks) except normal menstruation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 The patient confirms no GIT bleed or bleeding, gastric or duodenal ulcer within the last 6 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 The patient confirms they have not had a stroke or TIA in the last 12 months and no permanent disability from a previous stroke</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 The patient confirms they have not been treated for any serious structural nervous system or brain condition, including tumours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 The patient confirms no surgical operation, invasive procedure, tooth extractions, significant trauma requiring hospital admission, or head injury within the last 4 weeks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 The patient confirms she is not pregnant, nor has given birth including miscarriage in the last 2 weeks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 The patient confirms no liver or renal failure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 ST Elevation Myocardial Infarction (STEMI) confirmed by the ECG Reading Service from transmitted 12 Lead ECG</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do Not proceed with Nurse Administered Thrombolysis unless all responses are YES

Name:  
Signature:  
Designation:  
Date:  

312(14/10/15)
Nurse Administered  
Thrombolysis (NAT)

Nurse Administered Thrombolysis (NAT) Administration Checklist

A. To proceed, all responses must be ticked YES for all sections

YES NO

ECG indicates “Meets ST Elevation MI Criteria and/or “Consider Acute Infarct”

The ECG has been transmitted to the ECG Reading Service

The medical officer on call has been notified

The ECG Reading Service medical officer confirms that the ECG meets STEMI criteria

Name of ECG Reading Service medical officer: Time consulted:

Interpreter used?

If yes, name of interpreter: Telephone interpreter used:

NAT patient screening tool completed and all 14 responses are YES

B. Patient information script - To be read exactly

NB: The interpreter service must be contacted for any non-English speaking patients.

Your ECG (heart tracing) has been transmitted to a medical specialist who has identified that you are suffering from a heart attack, which is caused by a clot blocking blood flow to your heart muscle. The longer the blockage is left untreated, the more of the heart muscle is damaged. Your recommended treatment includes a clot busting medicine called TENECTEPLASE and medicines that reduce new clot formation called ENOXAPARIN, ASPIRIN and CLOPIDOGREL.

The sooner you receive these medicines, the lower your risk of dying from this heart attack - which is why doctors recommend that treatment is started as soon as possible.

The likely benefits of using these medicines are generally much greater than the risks of potential harm for a person in your circumstance.

Treatment at this stage generally improves the chances of surviving by approximately 25%, but it can sometimes cause serious side effects. These risks include: significant bleeding, which is not normally life threatening and can occur in about 4 in 100 patients and there is a risk of life-threatening stroke, which can affect up to 2 in every 100 patients. Some patients may have allergic reactions and other side effects that do not usually cause any major problems.

C. Patient Consent – Patient agrees with the following script

• You have been advised that you are having a heart attack. The information outlining the risks and benefits of treatment has been read to you
• Do you understand that you will be given a clot dissolving drug and associated treatment?
• Do you consent to this treatment?

YES NO

The patient information script was read exactly to the patient (section B)

The patient indicates that they consent to the treatment by agreeing with the statements above (section C)

I (Name of RN)………………………………………….., declare that I have explained to the patient and gained consent to administer Nurse Administered Thrombolysis

Name: ___________________________________________ Signature: _____________________________

Designation: __________________________________ Date and time: ____________________________

312(14/10/15)
11 NAT Standing Order Medication Overview

The NAT medication overview below must be read in conjunction with individual standing orders.

<table>
<thead>
<tr>
<th>Patient 18 - 74 years</th>
<th>Patient 75 years and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Aspirin 300 mg - tablet if not already given</td>
<td>• Aspirin 300 mg - tablet if not already given</td>
</tr>
<tr>
<td>• Clopidogrel 300 mg (4 x 75 mg tablets)</td>
<td>• Clopidogrel 75 mg (1 x 75 mg tablet)</td>
</tr>
<tr>
<td>• Tenecteplase IV 18 - 74 year dose</td>
<td>• Tenecteplase IV ≥75 year dose</td>
</tr>
<tr>
<td>15 minutes after tenecteplase:</td>
<td></td>
</tr>
<tr>
<td>• Enoxaparin 30mg IV (0.3 mL) bolus</td>
<td><strong>NB:</strong> No IV Enoxaparin dose for ≥ 75 years</td>
</tr>
<tr>
<td><strong>PLUS</strong></td>
<td></td>
</tr>
<tr>
<td>15 minutes after IV enoxaparin:</td>
<td>15 minutes after tenecteplase:</td>
</tr>
<tr>
<td>• Enoxaparin SC (1mg/kg) Max 100 mg</td>
<td>• Enoxaparin SC (0.75 mg/kg) Max 100 mg</td>
</tr>
</tbody>
</table>

Adopted courtesy of NSW Ambulance June 2015
### 11.1 Standing Order for the Administration of Clopidogrel for Management of ST Elevation Myocardial Infarction following NAT protocol

<table>
<thead>
<tr>
<th>TITLE</th>
<th>Clopidogrel Standing Order for Nurse Administered Thrombolysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drug</strong></td>
<td>Clopidogrel</td>
</tr>
<tr>
<td><strong>Indication</strong></td>
<td>Antiplatelet therapy given in combination with aspirin prior to administration of thrombolysis in patients meeting the criteria for NAT and consenting to treatment.</td>
</tr>
<tr>
<td><strong>Contraindications</strong></td>
<td>Failure to meet ALL NAT eligibility screening criteria, AND/OR allergy or hypersensitivity to clopidogrel.</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td>75 mg tablets</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td>Oral as a STAT dose prior to thrombolysis</td>
</tr>
<tr>
<td><strong>Dose</strong></td>
<td><strong>Patients 18 - 74 years of age</strong></td>
</tr>
<tr>
<td></td>
<td>300 mg (4 x 75 mg tablets)</td>
</tr>
<tr>
<td><strong>Adverse effects</strong></td>
<td>Diarrhoea, allergic reactions e.g. asthma, angioedema, rhinitis, urticaria, laryngeal oedema and shock. Aggravation of any bleeding tendency, bleeding may take longer to stop and gastric irritation.</td>
</tr>
<tr>
<td><strong>Nursing Implications</strong></td>
<td>Clopidogrel MUST only be administered under this Standing Order following screening of the patient using the NAT screening tool and completion and administration checklist which includes confirmation of STEMI from the ECG Reading Service and prior to thrombolysis treatment with tenecteplase.</td>
</tr>
<tr>
<td><strong>Monitoring</strong></td>
<td>Patients need continuous cardiac monitoring for at least 24 hours as per NSW Health PD 2008_055.</td>
</tr>
<tr>
<td></td>
<td>Observe for signs of bleeding or bruising.</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td>Complete screening tool, checklist and obtain patient verbal consent</td>
</tr>
<tr>
<td></td>
<td>Record dose of clopidogrel on the “Once only and nurse initiated medicines and pre-medications” section of the medication chart, with the symbol STO, and include the time and dosage given.</td>
</tr>
<tr>
<td></td>
<td>The above medication order must be CHECKED and COUNTERSIGNED by the medical officer within 24 hours as per local procedures.</td>
</tr>
<tr>
<td><strong>LHD Drug and Therapeutics Committee approval</strong></td>
<td>Date of approval</td>
</tr>
<tr>
<td></td>
<td>Name and signature:</td>
</tr>
<tr>
<td></td>
<td>Date for Review:</td>
</tr>
</tbody>
</table>
11.2 Standing Order for the Administration of Tenecteplase for Management of ST Elevation Myocardial Infarction following NAT protocol

<table>
<thead>
<tr>
<th>TITLE</th>
<th>Tenecteplase Standing Order for Nurse Administered Thrombolysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug</td>
<td>Tenecteplase (Metalyse®)</td>
</tr>
<tr>
<td>Indication</td>
<td>Thrombolysis in a patient meeting the criteria for NAT and consenting to treatment</td>
</tr>
<tr>
<td>Contraindications</td>
<td>Failure to meet ALL NAT eligibility screening criteria, AND/OR allergy or hypersensitivity to Tenecteplase</td>
</tr>
<tr>
<td>Presentation</td>
<td>40 mg and 50 mg vials</td>
</tr>
<tr>
<td>Administration</td>
<td>Intravenous (IV) bolus over 10 seconds and flushed with 30 mL 0.9% sodium chloride. Tenecteplase is incompatible with glucose solution.</td>
</tr>
<tr>
<td>Dose</td>
<td>Weight adjusted dosage:</td>
</tr>
<tr>
<td></td>
<td>Kg</td>
</tr>
<tr>
<td>Less than 60 kg</td>
<td>30 mg = 6 mL</td>
</tr>
<tr>
<td>60–69 kg</td>
<td>35 mg = 7 mL</td>
</tr>
<tr>
<td>70–79 kg</td>
<td>40 mg = 8 mL</td>
</tr>
<tr>
<td>80–89 kg</td>
<td>45 mg = 9 mL</td>
</tr>
<tr>
<td>90 kg and above</td>
<td>50 mg = 10 mL</td>
</tr>
<tr>
<td>NB: Half dose for patients 75 years of age and over and a patient weight is required</td>
<td></td>
</tr>
<tr>
<td>Adverse effects relevant to NAT</td>
<td>Bleeding, including bleeding at injection sites, internal bleeding, intracranial haemorrhage, aggravation of any bleeding tendency, reperfusion arrhythmias (usually self-limiting), cardiac arrest and hypotension</td>
</tr>
<tr>
<td>Nursing implications</td>
<td>Tenecteplase (Metalyse®) MUST only be administered under this standing order following screening of the patient using the NAT screening tool and completion of the administration checklist which includes confirmation of STEMI from the ECG Reading Service. A positive response is required for ALL 14 NAT eligibility screening criteria to proceed to administer TENECTEPLASE. Exclusions: If the answer is NO to ANY question, this Standing Order MUST be exited and medical advice obtained. Consent: The RN MUST obtain verbal consent from the patient using the explanation script in 10.3 and confirm the information was provided and consent obtained. NB: The RN administering tenecteplase MUST obtain a patient weight and ideally ensure the patient has two reliable, well secured and patent cannulas in situ</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Patients must have continuous cardiac monitoring for at least 24 hours as per NSW Health PD 2008_055 Respiratory rate, temperature, pulse rate and rhythm, blood pressure, SpO₂, GCS and pain score every 15 minutes for at least 60 minutes. Observe for reperfusion arrhythmias including ventricular tachycardia and ventricular fibrillation and use the Advanced Life Support protocol if these occur. Record a 12 Lead ECG at 60 minutes post tenecteplase which must be reviewed by a medical officer. Observe for signs of bruising and/or bleeding and report to medical officer if occur.</td>
</tr>
<tr>
<td>Documentation</td>
<td>Complete screening tool, checklist, patient weight, obtain patient verbal consent and document vital signs Record dose of tenecteplase on the “Once only and nurse initiated medicines and pre-medications” section of the medication chart, with the symbol STO, and include the time and dosage. The above medication order must be CHECKED and COUNTERSIGNED by the medical officer within 24 hours as per local procedures.</td>
</tr>
<tr>
<td>LHD Drug and Therapeutics Committee approval</td>
<td>Date of approval Name and signature: Date for Review</td>
</tr>
</tbody>
</table>

1. Drug information is a guide only, for further information refer to Australian Medicines Handbook and product information via CIAP.
2. Dosages determined by ACI Cardiac Expert Reference Group (NSW Ambulance Cardiac Protocols) November 2014

312(14/10/15)
11.3 Standing Order for the Administration of Enoxaparin Sodium (Clexane®) for Management of ST Elevation Myocardial Infarction following NAT protocol

<table>
<thead>
<tr>
<th>TITLE</th>
<th>Enoxaparin Sodium (Clexane®) Standing Order for Nurse Administered Thrombolysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug</td>
<td>Enoxaparin sodium (Clexane®)</td>
</tr>
<tr>
<td>Indication</td>
<td>Anticoagulant therapy given immediately following administration of thrombolysis in a patient meeting the criteria for NAT and consenting to treatment</td>
</tr>
<tr>
<td>Contraindications</td>
<td>Failure to meet ALL NAT eligibility screening criteria AND/OR allergy or hypersensitivity to enoxaparin sodium or heparin induced thrombosis-thrombocytopenia syndrome (HITTS) Heparin-induced thrombocytopenia and thrombosis syndrome</td>
</tr>
<tr>
<td>Presentation</td>
<td>Intravenous administration • 40 mg ampoule Subcutaneous administration • 40 mg, 60 mg, 80 mg, 100 mg pre-filled syringes</td>
</tr>
<tr>
<td>Administration</td>
<td>Intravenous (IV) and subcutaneous (SC)</td>
</tr>
<tr>
<td>Dose</td>
<td>15 minutes following tenecteplase</td>
</tr>
<tr>
<td>18 - 74 years of age:</td>
<td>75 years of age and over:</td>
</tr>
<tr>
<td>• 30 mg enoxaparin IV bolus then; 15 minutes after IV enoxaparin give: • 1 mg/kg SC up to maximum of 100 mg SC (as per table 11.3.1)</td>
<td>• No IV bolus dose then; 15 minutes after tenecteplase give: • 0.75 mg/kg SC up to a maximum of 100 mg SC (as per table 11.3.1)</td>
</tr>
</tbody>
</table>

NB: Patients 75 years of age and over do NOT receive an initial intravenous (IV) dose of enoxaparin sodium.

| Adverse effects relevant to NAT | Bleeding, bruising and pain at injection site, thrombocytopenia, allergic reactions including urticaria and anaphylaxis. |
| Nursing Implications | Enoxaparin sodium (Clexane®) MUST only be administered under this standing order following screening of the patient using the NAT screening tool and completion of the administration checklist which includes confirmation of STEMI from the ECG Reading Service. NB: The RN administering enoxaparin sodium MUST obtain a patient weight. |
| Monitoring | Patients must have continuous cardiac monitoring for at least 24 hours as per NSW Health PD 2008_055 Observe for signs of bruising and/or bleeding and report to medical officer if this occurs. |
| Documentation | Complete screening tool, checklist and obtain patient verbal consent Record dose of enoxaparin on the “Once only and nurse initiated medicines and pre-medications” section of the medication chart, with the symbol STO, and include the time and dosage given. The above medication order must be CHECKED and COUNTERSIGNED by the medical officer within 24 hours as per local procedures. |
| LHD Drug and Therapeutics Committee approval | Date of approval Name and signature: Date for Review |

1. Drug information is a guide only, for further information refer to Australian Medicines Handbook and product information via CIAP.
2. Dosages determined by ACI Cardiac Expert Reference Group (NSW Ambulance Cardiac Protocols) November 2014
### 11.3.1 Enoxaparin Subcutaneous (SC) Dosage Table

The enoxaparin subcutaneous dosage must be calculated according to the patient's weight and age, using the table below as a guide.

**A.** Select the patient’s weight in the left hand column then

**B.** Select the patient’s age 18-74 years or 75 years and over

<table>
<thead>
<tr>
<th>Patient’s weight</th>
<th>18 - 74 years of age</th>
<th>75 years of age &amp; over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SC-1 mg/kg Max 100 mg</td>
<td>SC-0.75 mg/kg Max 100 mg</td>
</tr>
<tr>
<td>Kg</td>
<td>mg</td>
<td>mL</td>
</tr>
<tr>
<td>40</td>
<td>40</td>
<td>0.4</td>
</tr>
<tr>
<td>45</td>
<td>45</td>
<td>0.45</td>
</tr>
<tr>
<td>50</td>
<td>50</td>
<td>0.5</td>
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<tr>
<td>55</td>
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<td>0.55</td>
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<td>60</td>
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<td>1</td>
</tr>
<tr>
<td>135</td>
<td>100</td>
<td>1</td>
</tr>
</tbody>
</table>

Adopted courtesy of NSW Ambulance June 2015
### Page 1 of 2: Mandatory Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sect.</th>
<th>Definition</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date/ Time of Symptom Onset</td>
<td>1</td>
<td>Onset of severe, sustained symptoms</td>
<td>Date/Time</td>
</tr>
<tr>
<td>Type of First Clinical Contact</td>
<td>1</td>
<td>Select Hospital Triage or Inpatient Consult</td>
<td>Tick Box</td>
</tr>
<tr>
<td>Date/ Time of First Clinical Contact</td>
<td>1</td>
<td></td>
<td>Date/Time</td>
</tr>
<tr>
<td>Source of Diagnostic ECG</td>
<td>1</td>
<td>Select Hospital</td>
<td>Tick Box</td>
</tr>
<tr>
<td>Date/ Time of Diagnostic ECG</td>
<td>1</td>
<td></td>
<td>Date/Time</td>
</tr>
<tr>
<td>Date/Time of ECG Reading Service Contact</td>
<td>1</td>
<td>Use time ECG was transmitted or faxed/ emailed</td>
<td>Date/Time</td>
</tr>
<tr>
<td>Presentation Source to this hospital</td>
<td>1</td>
<td>Select “Community Present”, “Hospital Transfer” or “Existing Inpatient”</td>
<td>Tick Box</td>
</tr>
<tr>
<td>Date/Time of Arrival at this hospital</td>
<td>1</td>
<td>Not applicable if existing inpatient at the time of STEMI</td>
<td>Date/Time</td>
</tr>
<tr>
<td>OOH Cardiac Arrest</td>
<td>1</td>
<td></td>
<td>Yes/No</td>
</tr>
<tr>
<td>Patient Intubated</td>
<td>1</td>
<td></td>
<td>Yes/No</td>
</tr>
<tr>
<td>Thrombolyed</td>
<td>1</td>
<td>Select NAT, IHT or Nil</td>
<td>Tick Box</td>
</tr>
<tr>
<td>Date/ Time of Thrombolysis</td>
<td>1</td>
<td></td>
<td>Date/Time</td>
</tr>
<tr>
<td>Thrombolytic agent used</td>
<td>1</td>
<td>Select tenecteplase or Other</td>
<td>Tick Box</td>
</tr>
<tr>
<td>Transferred to Cath Lab Facility</td>
<td>1</td>
<td></td>
<td>Yes/No</td>
</tr>
<tr>
<td>Date/ Time of Transfer Request</td>
<td>1</td>
<td>Time Ambulance/MRU contacted to request patient transfer</td>
<td>Date/Time</td>
</tr>
<tr>
<td>Date/ Time of Transfer</td>
<td>1</td>
<td>Time patient actually left facility</td>
<td>Date/Time</td>
</tr>
<tr>
<td>Transfer Mode</td>
<td>1</td>
<td>Select “Road Ambulance”, “Helicopter”, “Fixed Wing”</td>
<td>Tick Box</td>
</tr>
</tbody>
</table>
### 12.2 Recommended Dataset for STEMI: Reperfusion Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sect.</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Rate</td>
<td>1</td>
<td>First recorded HR (use ambulance data if available)</td>
</tr>
<tr>
<td>Systolic BP</td>
<td>1</td>
<td>First recorded BP (use ambulance data if available)</td>
</tr>
<tr>
<td>Maximum ST Deviation</td>
<td>2</td>
<td>Record lead &amp; mm</td>
</tr>
<tr>
<td>Cardiac Biomarker (Type)</td>
<td>1</td>
<td>Trop I, Trop T, Trop T-HS or CK</td>
</tr>
<tr>
<td>Cardiac Biomarker (Type)</td>
<td>1</td>
<td>Only required if Trop I</td>
</tr>
<tr>
<td>Cardiac Biomarker (Assay) *</td>
<td>1</td>
<td>Tick Box</td>
</tr>
<tr>
<td>Cardiac Biomarker (Values)</td>
<td>3</td>
<td>Record initial, 24 hr peak and URL</td>
</tr>
<tr>
<td>Creatinine</td>
<td>2</td>
<td>Record baseline &amp; peak values</td>
</tr>
<tr>
<td>FBC</td>
<td>3</td>
<td>Record initial Hb, WCC &amp; Platelets</td>
</tr>
<tr>
<td>Killip Class</td>
<td>2</td>
<td>Select Class I – IV (include definition on form). Record on arrival + worst during admission</td>
</tr>
<tr>
<td>IABP Required</td>
<td>1</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Smoking History</td>
<td>1</td>
<td>Select &quot;Current&quot; &quot;Past&quot; or &quot;Never&quot; Actively smoking within last month = current</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1</td>
<td>Select YES if documented history prior to this admission</td>
</tr>
<tr>
<td>Hyperlipidaemia</td>
<td>1</td>
<td>Select YES if documented history prior to this admission</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>1</td>
<td>Select YES if documented history prior to this admission</td>
</tr>
<tr>
<td>Prior MI</td>
<td>2</td>
<td>Select YES if documented in health care record. If YES, add date (month &amp; year) if known</td>
</tr>
<tr>
<td>Prior PCI</td>
<td>2</td>
<td>Select YES if documented in health care record. If YES, add date (month &amp; year) if known</td>
</tr>
<tr>
<td>Prior CABG</td>
<td>2</td>
<td>Select YES if documented in health care record. If YES, add date (month &amp; year) if known</td>
</tr>
<tr>
<td>Family History of Premature CHD</td>
<td>1</td>
<td>Select YES if parent or sibling diagnosed with CHD (male relative under 55, female relative over 65)</td>
</tr>
<tr>
<td>Atrial Fibrillation</td>
<td>1</td>
<td>Select YES if documented history prior to this admission</td>
</tr>
<tr>
<td>Previous TIA/Stroke</td>
<td>1</td>
<td>Select YES if documented history prior to this admission</td>
</tr>
<tr>
<td>Aspirin</td>
<td>2</td>
<td>If YES, record date &amp; time of first dose given (during this presentation)</td>
</tr>
<tr>
<td>Other Antiplatelet</td>
<td>3</td>
<td>If YES, record name of agent + date &amp; time of first dose given (during this presentation)</td>
</tr>
<tr>
<td>New Oral Anti-Coagulant (NOAC)</td>
<td>3</td>
<td>If YES, record name of agent + date &amp; time of first dose given (during this presentation)</td>
</tr>
<tr>
<td>Statin Therapy</td>
<td>2</td>
<td>If YES, record date &amp; time of first does given (during this presentation)</td>
</tr>
<tr>
<td>Interpreter Needed for Consent</td>
<td>1</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

### In Hospital Outcome Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sect.</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re MI</td>
<td>1</td>
<td>If YES, also select one of the options listed below</td>
</tr>
<tr>
<td>Major Bleeding</td>
<td>1</td>
<td>Select YES if event requiring transfusion and/or decrease in HB by &gt;4g/dl</td>
</tr>
<tr>
<td>CVA</td>
<td>1</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

1. Spontaneous MI [Tn or CKMB>3XURL or new Q waves or LBBB]. If biomarkers elevated at reMI onset, >20% increase in Tn above stable baseline or >50% in CKMB above stable baseline is required
2. [early] stent thrombosis
3. Recurrent ST elevation [>1mm increase 2 leads] at <12/24 post index MI (excluding 1 or 2)
4. Post CABG – myocardial biomarkers [Tn or CKMB>5X URL or new Q waves or new LBBB]
13 REFERENCES

- Australasian College for Emergency Medicine Guidelines on the implementation of the Australian Triage Scale in the Emergency Department, G24, Version 03, 2013
- Australian Commission on Safety and Quality in Health Care Acute Coronary Syndromes Clinical Care Standard 2, December 2014
- National Heart Foundation Guidelines, Medical Journal of Australia, Vol 184, No 8, April 2006
- National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand for the Management of Acute Coronary Syndromes (ACS), Addendum 2011
- NSW Ambulance 2009 Report on Pre Hospital Thrombolysis as a proof of concept revised report April 2009
- NSW Ambulance Pre Thrombolysis Checklist, NSW Ambulance
- NSW Guardianship ACT 1987, No 257
- NSW Health Policy Directive - Cardiac Monitoring in Adult Cardiac Patients in Public Hospitals in NSW (PD 2008_055)
- NSW Health Policy Directive - Critical Care Tertiary Referral Networks and Transfer of Care (Adults) (PD2010_021)
- NSW Health Policy Directive - Consent to Medical Treatment - Patient Information (PD2005_406)
- NSW Health Policy Directive - High Risk Medicines Management (PD2015_029)
- NSW Health Policy Directive - Inter-facility Transfer Process for Adults Requiring Specialist Care (PD2011_031)
- NSW Health Policy Directive - Recognition and Management of Patients who are Clinically Deteriorating (PD2013_049)
NURSE DELEGATED EMERGENCY CARE (NDEC) NURSE MANAGEMENT GUIDELINES (NMG) (GL2017_009)

PURPOSE
The Nurse Management Guidelines (NMGs) direct all clinical care in the Nurse Delegated Emergency Care (NDEC) model. NDEC is designed to provide timely, quality care for patients presenting to Emergency Departments (EDs) in rural and remote areas with low risk, low acuity conditions. Under this model the care of these patients is delegated by the facility’s Medical Officer/s to specially trained and credentialed registered nurses (RNs).

The NMGs guides appropriately trained and credentialed RNs to undertake assessment, investigation, intervention and discharge of patients presenting to EDs with specific less-urgent conditions.

KEY PRINCIPLES
This Guideline should be used by NSW Health facilities and Local Health Districts that have implemented the NDEC model. The NDEC Nurse Management Guidelines must be used in Emergency Departments where the NDEC model operates in accordance with Section 1.5 of PD2015_024 Standing Orders for the Supply or Administration of Medication under the NDEC Model and with local modes of implementation.

USE OF THE GUIDELINE
This Guideline should be used by RNs accredited to practice NDEC, in accordance with the NDEC Education and Accreditation Framework. The Guideline must only be used in facilities where NDEC is approved and for patient presentations that meet the strict inclusion criteria. Local Health Districts should ensure relevant staff have ready access to these guidelines.

The full guideline can be accessed at:

312(15/05/17)
RN SUPPLY AND ADMINISTRATION OF STI THERAPIES IN PUBLICLY FUNDED SEXUAL HEALTH SERVICES (PD2018_014)

PURPOSE
This policy statement outlines the mandatory requirements for implementation and utilisation of the state-wide Protocol Supply and Administration of Sexually Transmissible Infection Therapies by Accredited Registered Nurses Employed in NSW Publicly Funded Sexual Health Services (PFSHS).

The Sexually Transmissible Infection (STI) treatment protocol increases the likelihood that patients attending PFSHS diagnosed with common sexual health infections and their sexual partners will; receive treatment in a timely manner, and treatment is available to all patients, regardless of their geographical location.

This STI treatment protocol authorises a Registered Nurse employed within a publicly funded sexual health service who has successfully completed an education and accreditation package to supply and/or administer specified medications to eligible patients and their sexual partners for the purpose of treatment of non-acute STIs.

Patients and sexual partners are assessed against inclusion criteria. If inclusion criteria are not met then a medical review must be sought.

MANDATORY REQUIREMENTS
This protocol is only for:
1) The management of patients with a confirmed STI diagnosis (through a positive laboratory test result or by an accepted diagnostic criteria) and who meet the criteria specified OR
2) Sexual partners for presumptive treatment of a STI and who meet the criteria specified.

The protocol is only to be used by RNs accredited to supply and administer STI treatments under protocol and in conjunction with the NSW Sexual Health Standards of Practice Manual.

Facilities must implement appropriate governance, identify and minimise the risks of adverse events as outlined under Implementation.

In accordance with NSW Health Policy Directive - Medication Handling in NSW Public Health Facilities (PD2013_043). Nurse medication protocols are to be approved by the relevant Drug and Therapeutics Committee to enable the nurse supply and administration of STI medications.

Each medication protocol must be reviewed every 12 months and re-approved as appropriate. Review must include sexual health experts such as Directors of Services, or Staff Specialists and Senior Nurses employed within Publicly Funded Sexual Health Services.

Medication administration and documentation must be as per the NSW Health Policy Directive – Medication Handling in NSW Public Health Facilities (PD2013_043).
Registered Nurses administering and supplying STI medication under protocol must have successfully completed the requisite education and accreditation packages which include:

- Sexual Health Services STI Pharmacotherapy education and accreditation package;
  and
- Clinical competency assessment and accreditation for sexual health nurses as outlined in Section 4: Accreditation of the NSW Sexual Health Standard Operating Procedure.

**IMPLEMENTATION**

The NSW Ministry of Health is responsible for:
Providing the mandatory requirements, standards and legal instrument to support implementation of the policy.

NSW STI Programs Units are responsible for:
Supporting implementation and making available necessary education and clinical protocols to support use. Identify issues related to implementation and ensure timely response.

The Clinical Excellence Commission is responsible for:
Supporting implementation of the policy where applicable to medication safety.

Chief Executives, Health Service Executives, Managers, Medical Directors are responsible for:
Assigning responsibility, personnel and resources to implement the policy as locally appropriate:

- Providing line managers with support to implement the policy in their areas; and
- Ensuring that local policies, protocols and procedures are in place at each facility to support implementation of the policy.
- Identify any issues related to implementation and escalate through to NSW STI Programs Unit.

Drug and Therapeutics Committees are responsible for:

- Endorsing medication protocols.
- Providing local oversight of the safe implementation of this policy.

Registered Nurses (RNs) supplying, and/or administering medications under this protocol are responsible for:

- Meeting all obligations under the RN Supply and Administration of STI Therapies in Publicly Funded Sexual Health Services Protocol.
- Completing requisite education and training and ensuring ongoing competence to administer and/or supply the medications contained within the RN Supply and Administration of STI Therapies in Publicly Funded Sexual Health Services Protocol.
- Documenting all assessments and details relating to the treatment of patients using the Medication Administration/Supply Checklist (Section 2.3).
- Reporting of any incidents involving use of RN Supply and Administration of STI Therapies in Publicly Funded Sexual Health Services Protocol.

Supply and Administration may only be carried out in PFSHS by registered nurses trained and credentialed to operate under this Protocol.
RN Supply and Administration of STI Therapies in Publicly Funded Sexual Health Services – Procedures

1 BACKGROUND

1.1 About this document
The state wide protocol outlines the procedure for the decision-making to treat eligible patients with STI treatments by immediately administering the medication or supplying for take-home use. Under the protocol an Accredited Registered Nurse (ARN) employed in a NSW publicly funded sexual health services may supply, and/or administer sexually transmissible infection therapies to eligible patients and sexual partners.

1.2 Key definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accredited Registered Nurse (ARN)</td>
<td>A registered nurse who has successfully completed requisite education and training to supply and administer sexually transmissible infection therapies and accredited under the NSW Health Sexual Health Services Standard Operating Procedures Manual.</td>
</tr>
<tr>
<td>Administer</td>
<td>To ‘administer’ means the supervised administration of a medication in a health facility.</td>
</tr>
<tr>
<td>Amsel’s criteria (modified)</td>
<td>In the presence of thin white/grey homogenous discharge a diagnosis is made if 2 of following criteria are present: 1. Vaginal fluid raised pH (pH&gt;4.5) using pH paper 2. Genital malodour or Amine test where available 3. Clue cells on high vaginal gram stain as reported by laboratory or visualised during onsite microscopy (most specific).</td>
</tr>
<tr>
<td>Confirmed non-gonococcal urethritis</td>
<td>Gram stain of urethral discharge with greater than 4 polymorphonuclear cells per high power microscopic field (&gt; 4 PMN/HPM) and no gram-negative diplococci present.</td>
</tr>
<tr>
<td>Contact tracing</td>
<td>The process of identifying relevant contacts of a person with an infectious disease for the purpose of partner notification.</td>
</tr>
<tr>
<td>Diagnostic criteria</td>
<td>An accepted set of standards to determine diagnosis at point of care.</td>
</tr>
<tr>
<td>Employed within Publicly Funded Sexual Health Service (PFSHS)</td>
<td>Currently employed within public sexual health service in NSW with appropriate supervision.</td>
</tr>
<tr>
<td>Genital site</td>
<td>Encompasses urethral, cervical or vaginal sites of infection.</td>
</tr>
<tr>
<td>Medical record</td>
<td>Patient’s medical record within PFSHS. This can be paper based, electronic or a hybrid.</td>
</tr>
<tr>
<td>Must</td>
<td>Indicates a mandatory action requiring compliance.</td>
</tr>
<tr>
<td>Partner notification</td>
<td>When partners are informed of their possible exposure to an STI and provided information on how to access testing and treatment.</td>
</tr>
<tr>
<td>Presumptive treatment</td>
<td>Refers to the administration of antibiotics when the diagnosis is considered likely, but before the results of...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15. NURSING</th>
<th>15.45</th>
</tr>
</thead>
<tbody>
<tr>
<td>confirmatory tests are available. Also referred to as epidemiological treatment.4</td>
<td></td>
</tr>
<tr>
<td><strong>Publicly Funded Sexual Health Service (PFSHS)</strong></td>
<td>Publicly funded sexual health services are available across NSW and provide a range of medical, counselling and health promotion services to those most at risk of HIV/AIDS and sexually transmissible infections on site or via community outreach services.</td>
</tr>
<tr>
<td><strong>Retest</strong></td>
<td>Undertaken to detect reinfection.</td>
</tr>
<tr>
<td><strong>Should</strong></td>
<td>Indicates obligation, duty or correctness of an action to be followed unless there are sound reasons for taking a different course of action.</td>
</tr>
<tr>
<td><strong>Supply</strong></td>
<td>In this document to ‘supply’ means the provision of a medication for take-home use.</td>
</tr>
<tr>
<td><strong>Syndromic management</strong></td>
<td>Identification of consistent groups of symptoms and easily recognised signs leading to the provision of treatment that will deal with the majority or most serious organisms responsible for producing the identified syndrome.</td>
</tr>
<tr>
<td><strong>Syndromic management of non-gonococcal urethritis</strong></td>
<td>Approach to clinical care where no onsite microscopy is available and patient reports urethral discharge or dysuria and mucopurulent urethral discharge is noted on examination.</td>
</tr>
<tr>
<td><strong>Test of Cure</strong></td>
<td>Assessing for treatment failure, i.e. persistence of infection despite treatment.</td>
</tr>
</tbody>
</table>
| **Uncomplicated** | Status of condition; symptoms not present for more than 7 days including:  
• urethral discharge,  
• vaginal discharge,  
• genital itch or  
• dysuria,  
and no additional symptoms such as:  
• intermenstrual bleeding (IMB),  
• post-coital bleeding (PCB),  
• lower pelvic pain,  
• dyspareunia,  
• fever,  
• testicular pain,  
• breaks in skin or ulceration,  
• anal discharge or bleeding,  
• anal pain or  
• tenesmus. |

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1.3 Legal and legislative framework
Registered nurses employed within sexual health services and accredited to provide medication under this protocol must adhere to the Nursing and Midwifery Professional Code of Conduct for Nurses and remain accountable for their nursing practice. This includes their scope of practice as per the Nursing and Midwifery Board.

Facilities and accredited RNs operating within this protocol must otherwise conform to the NSW Sexual Health Standard Operating Procedures, Local Health District policy and procedures and/or business rules and NSW Health Policy Directive - Medication Handling in NSW Public Health Facilities (PD2013_043), in particular under 7.6: Principles for Safe Medication Administration.

Under clauses 170 and 171 of the Poisons and Therapeutic Goods Regulation 2008 the Secretary of Health has authorised Accredited Registered Nurses to supply (including administer) the Schedule 4 medications (Section 3 - Nurse Medication Protocols).

1.4 Medication storage, labelling and supply
Storage of medication within PFSHS should be in accordance with requirements outlined in the NSW Health Policy Directive Medication Handling in Public Health Facilities (PD2013_043) (Section 5.1 Responsibility; Section 5.3.1 Medication Security and Access; and Section 5.3.3 General Medication Storage Requirements). Medication is to be labelled in accordance with Poisons and Therapeutic Goods Regulation 2008.

Registered nurses may supply and/or administer medication from an imprest located within PFHSHS. These medications are packaged and labelled by the hospital/outpatient pharmacy and the imprest meets storage and labelling requirements as outlined in PD2013_043: Medication Handling in Public Health Facilities.

Under this protocol, registered nurses must record the date medication is supplied for take home use and the first and last name of patient on the pre-packaged medication label prior to supplying. The medication labels must also identify the service contact information (name of PFHSHS, address and telephone number).

For every medication supplied and/or administered, documentation within the medication section of the patient’s medical record must include the drug name, strength, brand, lot number, expiry date, date of supply, quantity supplied, name, signature and designation.

A flowchart outlining the process of supply and administration by accredited registered nurses under protocol is outlined in the Attachment (Section 4. Attachment 3 Flowchart - Medication Supply under Protocol).

1.5 Clinical Governance
PFHSHS must have an internal medical record audit process in place that includes medication supply and administration undertaken using the Protocol RN Supply and Administration of STI Therapies in Publicly Funded Sexual Health Services. Any medication errors that occur under this protocol must be recorded via IIMS.

Medical records quality improvement program standard of practice is outlined in the NSW Sexual Health Standard of Practice Manual.

312(16/05/18)
1.6 Contact tracing
Contact tracing is a high priority to prevent onward transmission of STI and reinfection of the patient because many sexual partners will be asymptomatic.

Patients diagnosed with chlamydia, gonorrhoea or trichomoniasis must receive explanations regarding the available methods for informing their partners (partner notification) and an offer of assistance in notifying partners. For patients diagnosed with chlamydia, this will also include patient delivered partner therapy (PDPT) (Section 3.2 Azithromycin for treatment of chlamydia as PDPT).

If there are any difficulties with the patient notifying their sexual partners, the nurse should offer to undertake partner notification on behalf of the patient. For further information, refer to the NSW Sexual Health Contact Tracing Standard of Practice Section C3.

All sexual partners presenting to PFSHS should be offered presumptive (epidemiological) treatment and STI testing as outlined in the NSW Sexual Health Standards Operating Procedures – Section C3, C13 and C14.

1.7 Documentation
Patient consultations including interventions, patient education, follow up advice and contact tracing/partner notification discussions as part of medication supply and administration are to be documented within the patient’s medical record. Patient eligibility for this protocol must be documented within the patient’s medical record.

2. ASSESSMENT OF PATIENT TO DETERMINE ELIGIBILITY UNDER PROTOCOL

2.1 Inclusion criteria
To supply and/or administer medicines under protocol for a sexually transmitted infection the patient must meet all of the following eligibility criteria:

• Have an uncomplicated infection,
• Have the site of infection specified,
• Is 14 years of age or over
• Have no contraindications to medication as outlined on individual protocols,

PLUS

• Have a confirmed laboratory test,

OR

• Have diagnosis confirmed at the point of care by the patient’s signs and symptoms meeting the accepted diagnostic criteria for that condition,

OR

• Be for the purpose of presumptive treatment of sexual contacts.

2.2 Exclusion criteria
The patient is not eligible for treatment under protocol if the above inclusion criteria are not met. Consultation with a medical officer must be sought.

312(16/05/18)
2.3 Medication Supply/Administration Checklist

<table>
<thead>
<tr>
<th>STI Diagnosis</th>
<th>Antimicrobial</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>Azithromycin 1 g as a single dose, orally</td>
<td>3.1, 3.2**</td>
</tr>
<tr>
<td></td>
<td>Doxycycline 100 mg 12-hourly for 7 days* orally</td>
<td>3.5</td>
</tr>
<tr>
<td>Non Gonococcal Urethritis (NGU)</td>
<td>Azithromycin 1 g as a single dose, orally</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>Doxycycline 100 mg twice daily for 7 days, orally*</td>
<td>3.5</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>Ceftriaxone 500 mg as a single dose, by intramuscular injection plus Azithromycin 1 g as a single dose, orally</td>
<td>3.4</td>
</tr>
<tr>
<td>Trichomoniasis</td>
<td>Metronidazole 2 g as a single dose, orally</td>
<td>3.6</td>
</tr>
<tr>
<td>Bacterial Vaginosis</td>
<td>Metronidazole 400 mg twice daily for 5 days, orally*</td>
<td>3.7</td>
</tr>
</tbody>
</table>

* patient only **partner only

Record of STI Diagnosis
- Laboratory test confirms diagnosis and is located in medical record or
- Diagnosis confirmed at point of care and recorded in medical record or
- Epidemiological treatment of sexual contact

Patient Administration/Eligibility Criteria Checklist
- Is 14 years of age or over?
- Reports no fever, chills, body aches or flu like symptoms?
- Reports no IMB, PCB, pelvic pain, dyspareunia, fever, testicular pain, and breaks in skin or ulceration or rectal discharge or bleeding; anal pain or tenesmus?
- Reports no urethral discharge, vaginal discharge, genital itch or dysuria for more than seven days?
- Reports no previous allergy, reaction or hypersensitivity to relevant medication?
- Reports no contraindications including drug interactions as outlined on relevant medication protocol?
- Pulse is above 50 and below 120 beats per minutes?
- Temperature is above 35.5 and below 39.5 degrees Celsius?

Patient Education Checklist
- Advised no unprotected intercourse until medication complete.
- Provided information on how to take medications including drug interactions.
- Informed of common side effects associated with medication.
- Advised when to seek medical advice in case of allergic reaction or adverse events related to medication.
- Advised of expected symptom resolution (if symptoms present).
- Advised timing of test of cure and/or retest per medication protocol.
- Contact tracing and STI testing of sexual contacts undertaken per medication protocol and NSW Sexual Health Standards Operating Procedures – Section C3, C13 and C14.
### 3 NURSE MEDICATION PROTOCOLS

#### 3.1 Azithromycin supply and administration for treatment of uncomplicated genital or pharyngeal chlamydia and/or treatment of chlamydia in recent sexual contacts

| Indications | 1. Antibiotic treatment of laboratory confirmed pharyngeal or genital chlamydia.  
|            | 2. Presumptive antibiotic treatment of sexual contacts of genital, rectal or pharyngeal chlamydia of up to 6 months. |
| Drug | Azithromycin, anti-infective macrolide |
| Presentation | Tablets: 500 mg |
| Contraindications | • Failure to meet all eligibility criteria per Medication Supply/Administration Checklist.  
| | • Hypersensitivity or allergy to azithromycin, erythromycin, any other macrolide antibiotic, or to any of the inactive ingredients in the product information (PI).  
| | • Concomitant medications known to prolong the QT interval (see Drug Interactions below). |
| Pregnancy Category | B1<sup>6</sup>; Recommended treatment in pregnancy<sup>7</sup> |
| Dose and frequency | 1 g; (2 x 500 mg tablets) as a single dose, orally |
| Supply and administration | • Oral (2 x 500 mg tablets)  
| | • May be taken with food  
| | • Take antacids at least one hour before or two hours after azithromycin  
| | • If vomiting occurs within 2 hours of administration, then retreatment is recommended.  
| | May be administered within a service or the medication may be supplied via pre-labelled stock for take home use outside the service |
| Drug Interactions | • Antacids - not to be taken concurrently (see Supply and administration above)  
| | • Cyclosporin  
| | • Warfarin  
| | • Digoxin  
| | • Medications known to prolong the QT interval e.g. some antiarrhythmics (amiodarone, disopyramide, sotalol), some antipsychotics (amisulpride, droperidol, haloperidol, ziprasidone), some antidepressants (citalopram, escitalopram, fluoxetine, tricycles) and some anti-infectives and antineoplastics. |
| Adverse Effects relevant to STI treatment | Common: nausea, vomiting, diarrhoea, abdominal pain and cramps  
| | Rare: hypersensitivity (e.g. anaphylaxis, severe skin reaction) |

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<sup>5</sup> The drug information provided is to act as a guide only; further information reference should be made to the full product information available in MIMS or the Australian Medicines Handbook. If contraindications, precautions or interactions are present, refer to MO before supply and or administration.

<sup>6</sup> Australian Pregnancy Category B1: Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals have not shown evidence of an increased occurrence of fetal damage.

### Nursing Implications

Rule out symptoms indicating **pelvic inflammatory disease (PID)** (complaints of fever, chills, nausea and vomiting, bilateral lower pelvic pain, IMB or PCB).

Rule out symptoms indicating **epididymitis** (complaints of scrotal pain or swelling).

### Patient Education

Advise the patient to avoid sex (oral, vaginal or anal sex) for 7 days after both they and their current partner/s have been treated for chlamydia.

Seek medical advice if signs of an allergic reaction (rare) such as rash, swelling, difficulty breathing.

Advise patient that re-testing for genital chlamydia to detect re-infection is recommended at 3 months.

In pregnant women, test of cure is recommended 4 weeks post completion of the treatment.


### Contact Tracing

Male and female partners should be traced back for up to 6 months. Consider the use of patient delivered partner therapy (PDPT) per section 3.2.

### Related Documents

- Medication Administration/Supply Checklist
- Consumer Medicine Information

### Local Nurse Protocol Authorisation:

Date approved by __________ LHD Drug and Therapeutics Committee:

Review Date:

312(16/05/18)
### Indication
Presumptive antibiotic treatment of contacts in past 6 months of heterosexual patients with pharyngeal or genital chlamydia; to be supplied through patient delivered partner therapy.

### Drug
Azithromycin; anti-infective macrolide

### Presentation
Tablets: 500 mg

### Contraindications
- Use of patient delivered partner therapy is not recommended in the following patients:
  - Those who identify as men who have sex with men (MSM).
  - Those who have been concurrently diagnosed with another STI.
  - Those who have experienced recent sexual assault.

  Patient delivered partner therapy is not recommended if the patient reports the following conditions in their partner/s:
  - Known hypersensitivity or allergy to azithromycin, erythromycin, any other macrolide or ketolide antibiotic, or to any of the inactive ingredients in the product.
  - Concomitant medications known to prolong the QT interval (see Drug Interactions below).
  - Partners with symptoms of PID or epididymo-orchitis.
  - Partners who may have rectal chlamydia infection.

### Pregnancy Category
B1; Recommended treatment in pregnancy

### Dose and frequency
1 g (2 x 500 mg tablets) as a single dose, orally

### Supply and administration
**Administration:**
- Oral (2 x 500 mg tablets)
- May be taken with food
- Take antacids at least one hour before or two hours after azithromycin
- If vomiting occurs within 2 hours of administration, then retreatment is recommended.

**Supply:**
- Supply in pre-labelled Patient Delivered Patient Therapy packs
- Packs must include hard copy patient and partner information sheets.

### Drug Interactions
- Antacids - not to be taken concurrently (see Supply and administration above)
- Cyclosporin
- Warfarin
- Digoxin

---

8 The drug information provided is to act as a guide only. Further information reference should be made to the full product information available in MIMS or the Australian Medicines Handbook. If contraindications, precautions or interactions are present, refer to MO before administration.

9 Australian Pregnancy Category B1: Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed.

Studies in animals have not shown evidence of an increased occurrence of fetal damage.

| Adverse Effects Relevant to STI Treatment | Common: nausea, vomiting, diarrhoea, abdominal pain and cramps  
Rare: hypersensitivity (e.g. anaphylaxis, severe skin reaction) |
| Nursing Implications | Purpose of PDPT is to eliminate chlamydia from recent sexual contacts who are unable or unlikely to seek clinical services in a timely manner to prevent re-infection of the index case and reduce further transmission. Chlamydia is often asymptomatic including among sexual contacts.  
Refer to PFSHS PDPT Clinical Pathway. |
| Patient Education | Provide the patient with PDPT Patient Infosheet and the PDPT Partner Infosheet advising patient to pass it on to the partner with the medication.  
Review with patient all relevant information related to medication administration and common medication adverse effects to pass on to partner.  
Encourage the partner to seek medical assistance directly (either by making a recommendation to the patient present, or attempting to contact the partner by telephone).  
Advise the patient to avoid sex (oral, vaginal or anal sex) for 7 days after both they and their current partner/s have been treated for chlamydia.  
Advise the patient that partners who have been provided PDPT for treatment of presumptive chlamydia should seek testing for other STIs. |
| Contact Tracing | Partners who are supplied treatment for chlamydia by patient delivered partner therapy should inform any additional sexual contacts to seek testing for chlamydia and other STIs. |
| Documentation | The registered nurse must also document the following:  
• A notation that the medication was given to the patient to give to the partner/s (include number of partners that medication was provided for)  
• The name and dose of medication  
• Quantity of PDPT medication packs supplied  
• Date of supply  
• First and last name of each partner the medication is intended for  
• Partner/s address or mobile number or email address.  
This information can be located in the medication section of the patient’s medical record or a separate log detailing contacts for which medication was provided and linked through the patient’s medical record number. |
Consumer Medicine Information  

Local Nurse Protocol Authorisation:

Date approved by ___________ LHD Drug and Therapeutics Committee:  
Review Date: 312(16/05/18)
# 3.4 Ceftriaxone administration and azithromycin supply and administration for treatment of uncomplicated gonorrhoea and/or treatment of gonorrhoea in recent sexual contacts

| Indications | 1. Antibiotic treatment of uncomplicated pharyngeal, genital or rectal gonococcal infection.  
|             | 2. Presumptive antibiotic treatment of gonorrhoea in patients presenting as a sexual contact of a patient with gonorrhoea infection in past 8 weeks. |
| Drugs       | Ceftriaxone, a broad spectrum cephalosporin antibiotic  
|             | PLUS  
|             | Azithromycin, an anti-infective macrolide |
| Presentation| Ceftriaxone Powder for injection: 500 mg, 1 g per vial  
|             | Azithromycin Tablets: 500 mg |
| Contraindications<sup>11</sup> | Ceftriaxone  
|             | • Failure to meet all eligibility criteria per Medication Supply/Administration Checklist.  
|             | • Known allergy to the cephalosporin class of antibiotics or a major allergy to penicillin (anaphylaxis, angioneurotic oedema, urticaria).  
|             | • History of antibiotic-associated pseudomembranous colitis.  
|             | • History of gastrointestinal disease (particularly colitis) or severe renal impairment (e.g. dialysis).  
|             | • Lignocaine should not be used as a diluent for intramuscular injection in patients who are hypersensitive to lignocaine.  
| Azithromycin | • Failure to meet all eligibility criteria per Medication Supply/Administration Checklist.  
|             | • Hypersensitivity or allergy to azithromycin, erythromycin, any other macrolide antibiotic, or to any of the inactive ingredients in the product information (PI).  
|             | • Concomitant medications known to prolong the QT interval (see Drug Interactions below). |
| Pregnancy Category | Ceftriaxone B1<sup>12</sup>; Recommended treatment in pregnancy<sup>13</sup>  
| Azithromycin | B1<sup>16</sup>; Recommended treatment in pregnancy<sup>14</sup> |

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<sup>11</sup> The drug information provided is to act as a guide only, for further information reference should be made to the full product info available on MIMS or the Australian Medicines Handbook If contraindications, precautions or interactions are present refer to MO before administration.  
<sup>12</sup> Australian Pregnancy Category B1: Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals have not shown evidence of an increased occurrence of fetal damage.  
<sup>13</sup> Australian STI Management Guidelines For Use in Primary Care April 2016, Australasian Sexual Health Alliance (ASHA) [http://www.sti-guidelines.org.au/](http://www.sti-guidelines.org.au/)  
<table>
<thead>
<tr>
<th>Dose and frequency</th>
<th>Ceftriaxone</th>
<th>500 mg as a single dose, by intramuscular injection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azithromycin</td>
<td>1 g (2 x 500 mg tablets) as a single dose, orally</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supply and administration and</th>
<th>Ceftriaxone</th>
<th>Deep intramuscular injection in lignocaine solution 1% to reduce pain at the injection site.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dissolve the contents of 500 mg vial in 2 mL of lignocaine 1% solution, administered by deep injection into gluteal muscle.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If using a 1 gram vial of ceftriaxone for IM injection, add 3.5 mL of 1% lignocaine and administer 2 mL of the reconstituted solution.¹⁵</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product is for single use in one patient only. Discard any residue.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local policy should include the requirement for a second person to check the preparation and administration of injectable medication wherever practicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Azithromycin</th>
<th>Oral; may be taken with food; do not take antacids concurrently</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>May be administered within a service or the medication may be supplied via pre-labelled stock for take home use outside the service.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drug Interactions</th>
<th>Ceftriaxone</th>
<th>No drug interactions of particular concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azithromycin</td>
<td></td>
<td>• Antacids - not to be taken concurrently (see Supply and administration above)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cyclosporin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Warfarin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Digoxin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medications known to prolong the QT interval e.g. some antiarrhythmics (amiodarone, disopyramide, sotalol), some antipsychotics (amisulpride, droperidol, haloperidol, ziprasidone), some antidepressants (citalopram, escitalopram, fluoxetine, tricyclics) and some anti-infectives and antineoplastics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adverse Effects relevant to STI treatment</th>
<th>Ceftriaxone</th>
<th>Common or infrequent: diarrhoea, nausea, vomiting, pain and inflammation at injection site, rash, hypersensitivity/allergy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Rare: Pseudomembranous colitis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Azithromycin</th>
<th>Common: nausea, vomiting, diarrhoea, abdominal pain and cramps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rare: hypersensitivity (e.g. anaphylaxis, severe skin reaction)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nursing Implications</th>
<th>Rule out symptoms indicating <strong>PID</strong> (complaints of fever, chills, nausea, and vomiting, bilateral lower pelvic pain, IMB or PCB).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rule out symptoms indicating <strong>epididymo-orchitis</strong> (complaints of scrotal pain or swelling).</td>
</tr>
<tr>
<td></td>
<td>Rule out symptoms indicating <strong>proctitis</strong> if rectal infection (complaints of</td>
</tr>
</tbody>
</table>
frequent urge to defecate, rectal pain, tenesmus, itching, rectal discharge or bleeding).

A culture must be taken from all patients with NAAT positive gonorrhoeae results prior to treatment. If culture plate not available collect black charcoal swab or if this is not available Amies agar gel transport medium swab for gonorrhoeae culture from the infected site prior to treatment.

Procedure outlined in the NSW Sexual Health Standards Operating Procedures – Section C13 and C14

Patient Education

Advise the patient to avoid sex (oral, vaginal or anal sex) for 7 days after both they and their current partner/s have been treated for gonorrhoea.

Seek medical advice if signs of an allergic reaction (rare) such as rash, swelling, difficulty breathing.

Symptoms, if present, should resolve within 3-5 days. Follow up is advised if symptoms do not resolve within 1 week.

Advise patient to undertake retesting or Test of Cure (TOC) as required.

<table>
<thead>
<tr>
<th>Site</th>
<th>Test of Cure (TOC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharyngeal</td>
<td>2-4 weeks post treatment</td>
</tr>
<tr>
<td>Rectal</td>
<td>2-4 weeks post treatment</td>
</tr>
<tr>
<td>Cervical</td>
<td>2-4 weeks post treatment</td>
</tr>
<tr>
<td>Urethral</td>
<td>Not recommended</td>
</tr>
<tr>
<td>Retest 3 months after exposure to gonorrhoea</td>
<td></td>
</tr>
</tbody>
</table>

Consider providing patient with relevant Consumer Medicine Information and a gonorrhoea factsheet https://stipu.nsw.gov.au/resources/patient-resources/

Contact Tracing

Male and female partners of gonorrhoea should be traced back for a minimum of 2 months.

Related Documents

Medication Supply/Administration Checklist

Consumer Medicine Information

Local Nurse Protocol Authorisation:

Date approved by ____________ LHD Drug and Therapeutics Committee:

Review Date:

312(16/05/18)

3.5 **Doxycycline supply for treatment of uncomplicated rectal chlamydia and/or treatment of non-gonococcal urethritis (NGU) in males**

| Indication                                                                 | 1. Antibiotic treatment of uncomplicated rectal chlamydia in non-pregnant patients.  
|                                                                          | 2. Antibiotic treatment of uncomplicated non-gonococcal urethritis (NGU) in males confirmed by microscopy or syndromic management where onsite microscopy is not available. |
| Drug                                                                      | Doxycycline; anti-infective tetracycline |
| Presentation                                                              | Tablets: 100 mg |
| Contraindications<sup>18</sup>                                            | • Failure to meet all eligibility criteria per Medication Supply/Administration Checklist  
|                                                                          | • Known hypersensitivity to tetracyclines  
|                                                                          | • Concurrent use of oral retinoids  
|                                                                          | • Concurrent use of Vitamin A  
|                                                                          | • Use in pregnancy or lactation  
|                                                                          | • History of increased intracranial hypertension  
|                                                                          | • History of photosensitivity |
| Pregnancy Category                                                       | D; Drugs which have caused, are suspected to have caused or may be expected to cause, an increased incidence of human fetal malformations or irreversible damage. |
| Dose and frequency                                                       | 100 mg twice daily for 7 days, orally |
| Supply and administration                                                | • Oral  
|                                                                          | • Best taken after food or milk  
|                                                                          | • Take with plenty of water (at least 100 mL) and remain upright for an hour after doxycycline  
|                                                                          | • Take antacids and preparations containing iron at least one hour before or two hours after doxycycline |
| Drug Interactions                                                        | • Antacids and iron preparations - not to be taken concurrently (see Supply and administration above)  
|                                                                          | • Warfarin  
|                                                                          | • Oral contraceptives (see Nursing Implications below)  
|                                                                          | • Penicillin  
|                                                                          | • Anticonvulsants (phenytoin, carbamazepine, barbiturates) - see  
|                                                                          | • Vitamin A and oral retinoids (see Contraindications above) |
| Adverse Effects Relevant to STI Treatment                                 | Common: gastrointestinal upsets, photosensitivity  
|                                                                          | Rare: hypersensitivity (e.g. anaphylaxis, severe skin reaction) |
| Nursing Implications                                                     | For rectal chlamydia:  
|                                                                          | • Rule symptoms indicating **proctitis** (complaints of the frequent urge to defecate, rectal pain, tenesmus, itching, rectal discharge or bleeding).  
|                                                                          | • **Lymphogranuloma venereum (LGV)** is a rare condition in Australia; an increase has been observed in MSM. It usually presents with symptoms of severe proctitis as above.  

<sup>17</sup> Australian STI Management Guidelines For Use in Primary Care April 2016, Australasian Sexual Health Alliance (ASHA) accessed on November, 11<sup>th</sup>, 2017 [http://www.sti.guidelines.org.au/](http://www.sti.guidelines.org.au/) recommends either Azithromycin 1 gram as a single dose or Doxycycline 100mg twice daily for 7 days. Note: Both options are effective and use depends on local clinic treatment guidelines.  
<sup>18</sup> The drug information provided is to act as a guide only, for further information reference should be made to the full product info available on MIMS or the Australian Medicines Handbook If contraindications, precautions or interactions are present refer to MO before administration.
For NGU
- Rule out symptoms indicating **epididymo-orchitis** (complaints of scrotal pain or swelling).
- For syndromic management, undertake STI testing per standard of practice as outlined in the [NSW Sexual Health Standards Operating Procedures – Section C13](https://stipu.nsw.gov.au/resources/patient-resources).

Non-liver enzyme-inducing antibiotics such as tetracyclines do not reduce the effectiveness of CHCs [Combined Hormonal Contraceptives] and additional contraceptive protection is no longer advised for concurrent use despite the warnings in the Product Information.19

According to the manufacturer’s full product information, doxycycline can be safely used up to 18 weeks in pregnancy (16 weeks post conception) however pregnancy has been listed as a contraindication to patient eligibility under this protocol.

### Patient Education

Advising the patient to avoid sex (oral, vaginal or anal sex) for 7 days after both they and their current partner/s have been treated.

Seek medical advice immediately if signs of an allergic reaction (rare) such as rash, swelling, difficulty breathing.

Report any skin reactions if sun exposure as Doxycycline can cause skin to be more sensitive to sun.

Avoid sun exposure especially between the hours of 10am to 3pm. If sun exposure wear protective clothing and sunscreen SPF+30.

Avoid alcohol as can decrease the serum levels of doxycycline in the blood.

For NGU
- Advise patient to return for medical review if symptoms persist or recur after completing treatment.20
- For syndromic management of NGU, advise patient they may need to return for additional antibiotic treatment once aetiology confirmed.
- Re-testing for NGU advice will depend on confirmed aetiology.

For rectal chlamydia
- All cases should have a TOC performed at 4 weeks post completion of the treatment.
- Advise patient re-testing for chlamydia to detect re-infection is recommended at **3 months**.


### Contact Tracing

Chlamydia - Male and female sexual partners should be traced back for up to 6 months.
NGU - Male and female sexual partners should be traced back for a minimum of 4 weeks.

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3.6 Metronidazole supply and administration for treatment of trichomoniasis and/or treatment of trichomoniasis in recent sexual contacts

**Indications**

1. Antimicrobial for treatment of trichomoniasis (by NAAT or microscopy)
2. Antimicrobial for treatment of suspected trichomoniasis in recent sexual contacts (past 30 days) of patients with trichomoniasis
3. Antimicrobial for treatment of trichomoniasis in pregnant women if symptoms present

**Drug**

Metronidazole; nitroimidazole antibiotic

**Presentation**

Tablets: 200 mg, 400 mg

**Contraindications**

- Failure to meet all eligibility criteria per Medication Supply/Administration Checklist
- Hypersensitivity or allergy to imidazoles or to any of the inactive ingredients in the product
- Unable to avoid concurrent alcohol for 24 hours after treatment.
- Blood dyscrasias/disorders (or history)
- Active organic CNS disease
- Check for liver disease: metabolites may accumulate in severe hepatic impairment – may need to reduce dose; MO consult
- Lactation – oral metronidazole may affect taste of breast milk, consider intra vaginal treatment; MO consult required.

**Pregnancy Category**

B2 - Single-dose treatment with metronidazole recommended for all symptomatic pregnant patients

**Dose and frequency**

2 g (5 x 400 mg tablets) as a single dose, orally

**Supply and administration and supply**

- Oral (5 x 400 mg tablets)
- Swallow tablets whole with a glass of water
- Take with or after food
- Avoid alcohol during treatment and for 24 hours after finishing


22 The drug information provided is to act as a guide only, for further information reference should be made to the full product info available on MIMS or the Australian Medicines Handbook If contraindications, precautions or interactions are present refer to MO before administration

23 Category B2 - Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed.

Studies in animals are inadequate or may be lacking, but available data show no evidence of an increased occurrence of fetal damage

May be administered within a service or the medication may be supplied via pre-labelled stock for take home use outside the service.

## Drug Interactions
- Alcohol - during treatment and for 24 hours afterwards (see Nursing Implications below)
- Disulfuram (Antabuse®) - do not use metronidazole within 2 weeks of disulfiram.
- Warfarin or other medicines used to prevent blood clots
- Lithium
- Phenytoin
- Phenobarbitone
- Cimetidine
- Cyclosporin
- Some anticancer drugs (e.g. carmustine, cyclophosphamide, 5-fluorouracil, busulfan)

## Adverse Effects Relevant to STI Treatment
Common: gastrointestinal upsets, metallic taste, dizziness, headache
Rare: hypersensitivity (e.g. anaphylaxis, severe skin reaction)

## Nursing Implications
If TV detected on cervical screening (Pap smear), urine or high vaginal samples results must be confirmed by NAAT before initiating treatment.

In pregnant women treatment is recommended if symptoms present (malodourous vaginal discharge – often profuse and frothy; vaginal itch or soreness). If TV is detected in an asymptomatic pregnant women seek consultation with medical officer.

## Patient Education
Advise the patient to avoid sex (oral, vaginal or anal sex) for 7 days after both they and their current partner/s have been treated.

Seek medical advice immediately if signs of an allergic reaction (rare) such as rash, swelling, difficulty breathing.

Discuss interaction with alcohol. Advise to avoid alcohol including any medication with alcohol (i.e. cough syrup) on the day of treatment and for 24 hours after taking single dose treatment.


## Contact Tracing
Current sexual partners should be offered presumptive treatment for TV.

## Related Documents
Medication Supply/Administration Checklist
Consumer Medicine Information

## Local Nurse Protocol Authorisation:
Date approved by ___________ LHD Drug and Therapeutics Committee:
Review Date:

25 United Kingdom National Guideline on the Management of Trichomonas vaginalis 2014
Clinical Effectiveness Group, British Association for Sexual Health and HIV (BASHH) Treatment in Pregnancy and Breastfeeding
[https://www.bashh.org/documents/UK%20national%20guideline%20on%20the%20management%20of%20TV%20%202014.pdf](https://www.bashh.org/documents/UK%20national%20guideline%20on%20the%20management%20of%20TV%20%202014.pdf)
3.7 Metronidazole supply for treatment of bacterial vaginosis

| Indication | 1. Antimicrobial for treatment of bacterial vaginosis per modified Amsel’s criteria
|           | 2. Antimicrobial for treatment of bacterial vaginosis in pregnant women if symptoms present.
|           | 3. Antimicrobial-for women with symptoms undergoing termination of pregnancy

| Drug       | Metronidazole; nitroimidazole antibiotic

| Presentation | Tablets: 400 mg

| Contraindications | • Failure to meet all eligibility criteria per Medication Supply/Administration Checklist
|                  | • Hypersensitivity or allergy to imidazoles or to any of the inactive ingredients in the product
|                  | • Unable to avoid concurrent alcohol for 24 hours after treatment.
|                  | • Blood dyscrasias/disorders (or history)
|                  | • Active organic CNS disease
|                  | • Liver: metabolites may accumulate in severe hepatic impairment – may need to reduce dose; MO consult
|                  | • Lactation – oral metronidazole may affect taste of breast milk, consider intra vaginal treatment; MO consult

| Pregnancy Category | B2

| Dose and frequency | 400 mg every 12 hours for 5 days, orally

| Supply and administration and supply | • Orally
|                                      | • Swallow tablets whole with a glass of water
|                                      | • Take with or after food
|                                      | • Avoid alcohol during treatment and for 24 hours after finishing treatment

| Drug Interactions | • Alcohol - during treatment and for 24 hours afterwards (see nursing implications)
|                  | • Disulfiram (Antabuse®) - do not use metronidazole within 2 weeks of disulfiram.
|                  | • Warfarin or other medicines used to prevent blood clots
|                  | • Lithium
|                  | • Phenytoin
|                  | • Phenobarbitone
|                  | • Cimetidine
|                  | • Cyclosporin
|                  | • Some anticancer drugs (e.g. carmustine, cyclophosphamide, 5-

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26 The drug information provided is to act as a guide only, for further information reference should be made to the full product info available on MIMS or the Australian Medicines Handbook If contraindications, precautions or interactions are present refer to MO before supply and or/admistration.

27 Category B2 - Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed.


| Adverse Effects Relevant to STI Treatment | Common: gastrointestinal upsets, metallic taste, dizziness, headache
Rare: hypersensitivity (e.g. anaphylaxis, severe skin reaction) |
| Nursing Implications | For detailed information around sampling/laboratory procedures refer to [NSW Sexual Health Standard of Practice Manual Section C8 Laboratory Procedures and C14 Screening Women for STIs](http://www.sti.guidelines.org.au/) and define Amsel’s criteria is outlined in definition section of document. Bacterial vaginosis is associated with increased risk of spontaneous abortion, premature labour and PID. Rule out symptoms indicating PID (complaints of fever, chills, nausea and vomiting, bilateral lower pelvic pain, IMB or PCB). In symptomatic pregnant women, if patient presents with symptoms beyond usual BV presentation described then seek consultation with MO. |
| Patient Education | Advise patient to seek medical advice immediately if signs of an allergic reaction (rare) such as rash, swelling, difficulty breathing. Discuss factors that can disrupt normal vaginal flora such as douching as this can lead to replacement with high concentrations of anaerobic bacteria leading to bacteria vaginosis (BV). Discuss increase risk of thrush with use of medication. Advise patient to follow up if sore mouth, white mouth or tongue develops while taking or soon after stopping medication. Also if vaginal itching or discharge develops. Discuss interaction with alcohol. Advise to avoid alcohol including any medication with alcohol (i.e. cough syrup) on the day of treatment and for 24 hours after taking single dose treatment. Consider providing patient with relevant [Consumer Medicine Information](http://www.tga.gov.au/consumer-medicines-information-cmi) and a bacterial vaginosis factsheet [https://stipu.nsw.gov.au/resources/patient-resources/](https://stipu.nsw.gov.au/resources/patient-resources/) |
| Contact Tracing | Not required. Assess current female sexual partners as BV is common in female sex partners. |
| Related Documents | Medication Supply/Administration Checklist

**Local Nurse Protocol Authorisation:**

Date approved by _________ LHD Drug and Therapeutics Committee:

Review Date: 312(16/05/18)

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4 LIST OF ATTACHMENTS

1. Implementation Checklist  blank
2. Supporting standard operating procedures and clinical competencies
3. Algorithm for Supply and Administration of STI Therapies by Accredited Registered Nurses Employed in NSW PFSSH
4. Related Documents Internal and External
5. Glossary
6. Abbreviations
7. Acknowledgement
Attachment 2: Supporting standard operating procedures and clinical competencies


<table>
<thead>
<tr>
<th>Document Title</th>
<th>Page Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Tracing</td>
<td>25</td>
<td>To provide information and support about contact tracing for health care providers undertaking diagnosis and/or management of sexually transmissible infections (STI) and blood borne viruses (BBV) including HIV.</td>
</tr>
<tr>
<td>Laboratory Procedures</td>
<td>43</td>
<td>To provide information and procedural guidelines on laboratory investigations performed in NSW Sexual Health Services.</td>
</tr>
<tr>
<td>Medication Administration</td>
<td>49</td>
<td>To provide information and procedural guidelines on the administration of medications within publicly funded sexual health services.</td>
</tr>
<tr>
<td>Screening Men for STI</td>
<td>79</td>
<td>To provide procedural guidelines on routine screening and testing for sexually transmissible infections in men including specimen collection.</td>
</tr>
<tr>
<td>Screening Women for STI</td>
<td>88</td>
<td>Procedural guidelines on routine screening and testing for sexually transmissible infections and Pap smears in women including specimen collection.</td>
</tr>
<tr>
<td>STI Screening Guidelines for Men Who Have Sex with Men</td>
<td>138</td>
<td>To provide a guideline on the appropriate types of tests and frequency of STI testing for MSM.</td>
</tr>
<tr>
<td>Clinical competency assessment and accreditation for sexual health nurses</td>
<td>181</td>
<td>To provide a framework for clinical nurses working in PFSHS to undertake a process of clinical competency accreditation within their service.</td>
</tr>
<tr>
<td>Delegation of clinical practice</td>
<td>203</td>
<td>To provide information and procedural guidelines related to the delegation of clinical practices from the Director / Medical Officer to a Registered Nurse. This document outlines the scope of practice for nurses and is used as a training tool for new nurses.</td>
</tr>
<tr>
<td>Medical Record Quality Improvement</td>
<td>206</td>
<td>To provide a framework and set of tools for implementing and maintaining a medical record quality improvement (QI) program.</td>
</tr>
</tbody>
</table>
Attachment 3: Algorithm for Supply and Administration of STI Therapies by Accredited Registered Nurses Employed in NSW PFSHS

1. Patient/contact attends clinic for treatment of sexual health condition.
2. Accredited Registered Nurse (ARN) reviews patient/contact per nurse management guideline for condition and reviews patient for inclusion or exclusion criteria.
3. Assess patient/contact suitability for protocol medicine(s) including precautions, contra-indications and adverse effects.
4. Medication per protocol - No contraindications to medication identified.
5. 5 rights reviewed.
6. ARN supplies medication from pre-packaged clinic imprest stock.
7. Follows principles of safe medication administration.
8. Supply for immediate use.
   - ARN administers medication per protocol.
   - ARN labels medication with date; first and last name of patient.
   - ARN supplies medication to patient for later use.
10. Medication administration and/or supply recorded on EMR/Medical Record Hybrid.

- Referral or consultation with medical officer required i.e. under 14 years of age
- Patient presents with new symptoms
- Patient presents with complicated infection
- Contraindication to medication identified
- Chlamydia plus contact
- Gonorrhoea plus contact
- NGU plus contact
- Trichomoniasis plus contact
- Bacterial Vaginosis
Attachment 4: Related Documents

Internal

NSW Sexual Health Services Standard Operating Procedures Manual – NSW STIPU, 2013
NSW Health (2011) Your Health Rights and Responsibilities (PD2011_022), NSW Ministry of Health, Sydney

Related Documents External

Australian STI Management Guidelines for Use in Primary Care April 2016, Australasian Sexual Health Alliance (ASHA)
Consumer Medicine Information
eTG Complete July, 2017
www.tg.org.au
Attachment 5: Glossary

**Aetiology** is the causation of diseases and disorders as a subject of investigation.\(^{31}\)

**Amine test** is where a drop of vaginal discharge is mixed with a drop of saline on a slide and a drop of 5% potassium hydroxide added. If positive, a fishy amine smell is at once apparent.\(^{32}\)

**Amsel's criteria** is a clinical method for diagnosing bacterial vaginosis based presence of a homogenous vaginal discharge, Vaginal fluid raised pH (pH>4.5) – using pH paper, positive amine test, presence of clue cells (most specific).\(^{33}\)

**Epididymo-orchitis** is inflammation of the epididymis, and occasionally the testis.\(^{34}\)

**Medication imprest system** refers to a specific list and amount of common medications available in PFSHS. Staff monitor the levels and re-order from pharmacy when levels are low.

**Pelvic Inflammatory Disease** a syndrome comprising a spectrum of inflammatory disorders of the upper female genital tract, including any combination of endometritis, salpingitis, tubo-ovarian abscess and pelvic peritonitis.\(^{35}\)

**Polymorphonuclear cells** are white blood cells containing a segmented lobular nucleus; an eosinophil, basophil, or neutrophil.\(^{36}\)

**Proctitis** condition in which the lining tissue of the inner rectum becomes inflamed.\(^{37}\)

**Tenesmus** sensation of incomplete evacuation of the bowel after defecation.\(^{38}\)


### Attachment 6: List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>ARN</td>
<td>Accredited Registered Nurse</td>
</tr>
<tr>
<td>BBV</td>
<td>Blood Borne Virus</td>
</tr>
<tr>
<td>BV</td>
<td>Bacterial Vaginosis</td>
</tr>
<tr>
<td>CHC</td>
<td>Combined Hormonal Contraceptives</td>
</tr>
<tr>
<td>CMRQI</td>
<td>Continues Medical Record Quality Improvement Program</td>
</tr>
<tr>
<td>CNC</td>
<td>Clinical Nurse Consultant</td>
</tr>
<tr>
<td>HVS</td>
<td>High Vaginal Swab</td>
</tr>
<tr>
<td>IMB</td>
<td>Intermenstrual Bleeding</td>
</tr>
<tr>
<td>IMI</td>
<td>Intra Muscular Injection</td>
</tr>
<tr>
<td>KOH</td>
<td>Potassium Hydroxide</td>
</tr>
<tr>
<td>LHD</td>
<td>Local Health District</td>
</tr>
<tr>
<td>LGV</td>
<td>Lymphogranuloma venereum</td>
</tr>
<tr>
<td>MC&amp;S</td>
<td>Microscopy, Culture and Sensitivity</td>
</tr>
<tr>
<td>MO</td>
<td>Medical Officer</td>
</tr>
<tr>
<td>MR</td>
<td>Medical Record</td>
</tr>
<tr>
<td>MRN</td>
<td>Medical Record Number</td>
</tr>
<tr>
<td>MSM</td>
<td>Men who have Sex with Men</td>
</tr>
<tr>
<td>NAAT</td>
<td>Nucleic Acid Amplification Test</td>
</tr>
<tr>
<td>NGU</td>
<td>Non-Gonococcal Urethritis</td>
</tr>
<tr>
<td>NSW SH SOP</td>
<td>NSW Sexual Health Services Standard Operating Procedures Manual</td>
</tr>
<tr>
<td>PCB</td>
<td>Post Coital Bleeding</td>
</tr>
<tr>
<td>PCR</td>
<td>Polymerase Chain Reaction</td>
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<tr>
<td>PD</td>
<td>Policy Directive</td>
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<tr>
<td>PDPT</td>
<td>Patient Delivered Partner Therapy</td>
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<tr>
<td>PFSHS</td>
<td>(NSW) Publicly Funded Sexual Health Services</td>
</tr>
<tr>
<td>PFHF</td>
<td>Per High Power Field</td>
</tr>
<tr>
<td>PI</td>
<td>Product Information</td>
</tr>
<tr>
<td>PID</td>
<td>Pelvic Inflammatory Disease</td>
</tr>
<tr>
<td>PMNL</td>
<td>Polymorphonuclear Leukocyte (polymorph)</td>
</tr>
<tr>
<td>PO</td>
<td>Per Oral</td>
</tr>
<tr>
<td>PP</td>
<td>Pre Pack</td>
</tr>
</tbody>
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### Attachment 7: Acknowledgement
Thank you to Sydney Sexual Health Centre for use of Clinical Business Rules as a basis for the Nurse Management Guidelines. Also to NSW Senior Nurses Technical Group (SNTG) and Medical Directors Leadership group and all clinical reviewers for their valuable feedback.

312(16/05/18)