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Patient Matters

CHAPTER 15 - NURSING

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Updated as at 9/10/2020

NSW HEALTH NURSE PRACTITIONERS (PD2020_034)

PD2020_034 rescinds PD2012_026 and GL2012_004

POLICY STATEMENT

NSW Health organisations must have appropriate systems and processes in place forestablishing, implementing, governing and sustaining nurse practitioner roles.

SUMMARY OF POLICY REQUIREMENTS

NSW Health organisations are to conduct a service needs analysis to identify, describeand inform a business case to support the implementation of nurse practitioner roles. Adequate recurrent funding for a nurse practitioner service must exist to support the position beyond existing nursing workforce requirements.

Recruitment for nurse practitioner positions is to follow NSW Health Policy directive *Recruitment and Selection of Staff to the NSW Health Service* (PD2017_040). Organisations are not obligated to create nurse practitioner positions in order to regrade an individual who has been endorsed, commenced relevant study or expressed an interest in becoming an endorsed nurse practitioner.

Suitable registered nurse applicants for nurse practitioner positions are to be clinically and professionally supported to undertake a Nursing and Midwifery Board of Australia (NMBA)-approved nurse practitioner master's degree or supported to meet course entry requirements at time of employment.

Transitional nurse practitioner clinical training is to be supported by a clinical learning and development plan. All clinical practice by transitional nurse practitioners and nurse practitioner students is to remain supervised by an appropriately senior practitioner.

NSW Health organisations are to ensure a Nurse Practitioner Governance Committee is established to authorise the scope of practice for nurse practitioner and transitional nurse practitioner roles. Individual scopes of practice must be periodically reviewed.

A nurse practitioner's scope of practice document is to define the area of practice, expertise, accountabilities and practice of nursing required to satisfy the authority to prescribe in NSW.

Nurse practitioners are to prescribe within their scope of practice; in line with relevant legislation and NSW Health policies; and in accordance with facility Drug and Therapeutics Committee requirements, such as the relevant Hospital formulary.

Nurse practitioners may request diagnostic investigations relevant to their scope of practice, such as requesting pathology, medical imaging and other investigations.

Organisations are to periodically evaluate nurse practitioner services in terms of quality, safety, effectiveness, appropriateness, consumer participation, access and efficiency.

To download a copy of the NSW Health Nurse Practitioners: Policy and Procedures please go to: https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2020_034

NURSING AND MIDWIFERY MANAGEMENT OF ALCOHOL AND DRUG USE IN THE DELIVERY OF HEALTH CARE (PD2020_032)

PD2020_032 rescinds PD2007_091

POLICY STATEMENT

Nurses and midwives in all NSW Health care settings are to ensure people with drug and alcohol related issues experience person-centred, safe and high-quality intervention and care.

SUMMARY OF POLICY REQUIREMENTS

All care and treatment delivered to people who are experiencing harm from alcohol and other drug use is to be person centred and non-discriminatory.

On admission to a health service all patients will undergo an initial screening to identify alcohol and/or drug use and risks as part of all nursing and midwifery care.

The use of drugs and alcohol is to be recorded for all patients so that there is a consistent approach to provision of care and referral of patients to specialist services.

As part of responding to alcohol and/or drug use risks, nurses and midwives are to deliver brief interventions in line with their scope of practice, consult and refer to a specialist treatment provider for comprehensive assessment, as appropriate.

Nurses and midwives need to maintain awareness that patients presenting with risk factors, associated with alcohol and other drug use, also may predispose any child to increased risks to their wellbeing. Where this is identified, appropriate and sensitive questioning must be undertaken in line with NSW Health Policy.

The drug and alcohol goals, and treatment plan must be considered and integrated into their overall holistic health care plan, in collaboration with the patient.

Nurses and Midwives must ensure a patient's drug and alcohol health care needs are integrated into their transfer of care planning process.

At each transition of care, clinical handover must occur to ensure patient safety.

To download the Nursing and midwifery management of alcohol and drug use in the delivery of health care policy and procedures please go to:
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2020_032

332(03/09/20)

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

These guidelines provide nurses and midwives with support and a benchmark for quality drug and alcohol use assessment and care in daily practice. The Guidelines can be accessed at https://www1.health.nsw.gov.au/PDS/pages/doc.aspx?dn=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.

State-wide Nurse Administered Thrombolysis (NAT) protocol for ST Elevation Myocardial Infarction (STEMI): Procedures.

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

Antithrombotic medication	Medication which reduces the formation of thrombus; includes enoxaparin and antiplatelet medications; aspirin and clopidogrel.
CERS Assist	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.
ECG Reading Service	ECG interpretation for suspected STEMI provided by senior medical staff e.g. Cardiologist or Emergency Physician to support clinicians in rural and remote sites.
Escalation	The recognition and communication of patient deterioration to a more experienced colleague, followed by an appropriate response by the more experienced colleague.
Must	Indicates a mandatory action requiring compliance.
Nurse Administered Thrombolysis (NAT)	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.
NAT accredited RN	Registered nurse who has successfully completed the requisite education and training to administer anti-thrombotic and thrombolytic medication according to established protocol.
Person Responsible	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.
Should	Indicates obligation, duty or correctness, an action that should be followed unless there are sound reasons for taking a different course of action.
Telephone order	A medication order given over the telephone by a medical officer.
Thrombolysis	The dissolution of a blood clot, especially as induced artificially by infusion of an enzyme into the blood.
Thrombolytic medication	Medication which acts to dissolve blood clots e.g. tenecteplase.

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."* [1]

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.

1 Nursing and Midwifery Board of Australia Fact Sheet, Context of practice for registered nurses and midwives 2015,

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, SpO_2, 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.

2.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 Administere d 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®)

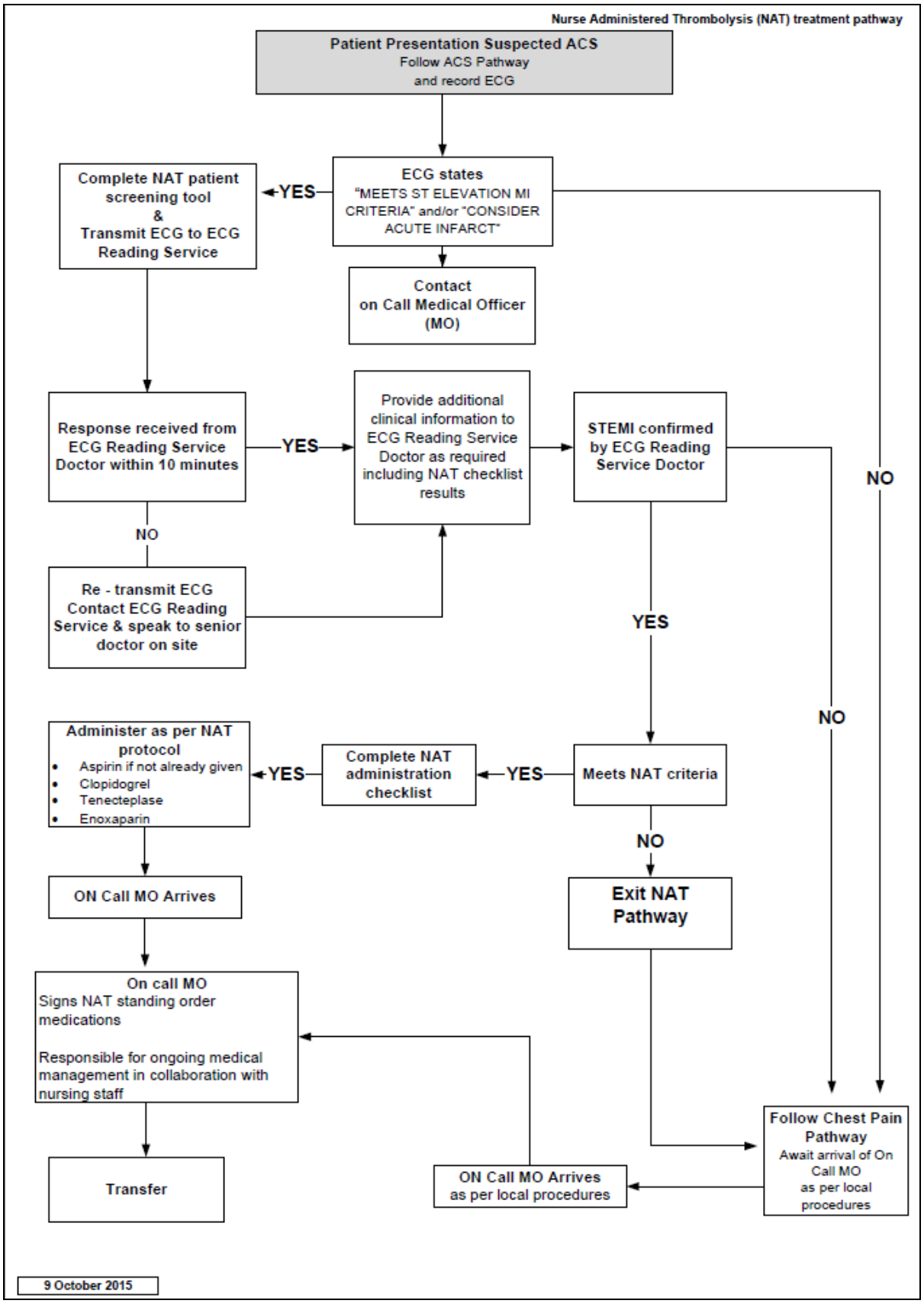
11.3.11 Enoxaparin Subcutaneous (SC) Dosage Table

Minimum data set for STEMI reperfusion model:

12 Mandatory data

12.1 Recommended data

10.1 Nurse Administered Thrombolysis (NAT) Treatment Pathway



10.2 **Nurse Administered Thrombolysis (NAT) Patient Screening Tool**

Facility:	Family name	MRN
Nurse Administered Thrombolysis (NAT)	Given name	Sex: M □ F □
	DOB:	MO:
	Address	

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

Nurse Administered Thrombolysis (NAT) Patient Screening Tool				
Tick YES or NO for each question		**YES**	**NO**	**COMMENTS**
1	The patient complains of non-traumatic chest pain **or** other symptoms consistent with acute coronary syndrome/ myocardial ischaemia			
2	The patient confirms sustained symptom onset was less than 6 hours ago			
3	The patient is conscious and orientated to time, place and person			
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			
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			
6	The patient confirms they are **not** taking warfarin, dabigatran, rivaroxaban, apixaban or any other anticoagulants *Antiplatelet medication such as aspirin, clopidogrel, prasugrel* and *ticagrelor is not a contraindication* **CHECK PATIENT MEDICATIONS**			
7	The patient confirms **no** active, suspected or known bleeding tendency or recent blood loss (within 4 weeks) except normal menstruation			
8	The patient confirms **no** GIT bleed or bleeding, gastric or duodenal ulcer within the last 6 months			
9	The patient confirms they have **no**t had a stroke or TIA in the last 12 months and no permanent disability from a previous stroke			
10	The patient confirms they have **not** been treated for any serious structural nervous system or brain condition, including tumours			
11	The patient confirms **no** surgical operation, invasive procedure, tooth extractions, significant trauma requiring hospital admission, or head injury within the last 4 weeks			
12	The patient confirms she is **not** pregnant, nor has given birth including miscarriage in the last 2 weeks			
13	The patient confirms **no** liver or renal failure			
14	ST Elevation Myocardial Infarction (STEMI) confirmed by the ECG Reading Service from transmitted 12 Lead ECG			

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

Name:	Signature:
Designation:	Date:

10.3 Nurse Administered Thrombolysis (NAT) Administration Checklist

Facility:	Family name	MRN
Nurse Administered Thrombolysis (NAT)	Given name	Sex: M □ F □
	DOB:	MO:
	Address	

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?

D. Nurse Declaration	**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:_____

11 NAT Standing Order Medication Overview

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

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

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

TITLE	Clopidogrel Standing Order for Nurse Administered Thrombolysis	
Drug	Clopidogrel	
Indication	Antiplatelet therapy given in combination with aspirin **prior** to administration of thrombolysis in patients meeting the criteria for NAT and consenting to treatment.	
Contraindications	Failure to meet ALL NAT eligibility screening criteria, AND/OR allergy or hypersensitivity to clopidogrel.	
Presentation[1]	75 mg tablets	
Administration	Oral as a STAT dose **prior** to thrombolysis	
Dose[2]	**Patients 18 -74** years of age	**Patients 75** years of age and above
	300 mg (4 x 75 mg tablets)	75 mg (1x 75 mg tablet)
Adverse effects[1] **relevant to NAT**	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.	
Nursing Implications	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.	
Monitoring	Patients need continuous cardiac monitoring for at least 24 hours as per NSW Health PD 2008_055. Observe for signs of bleeding or bruising.	
Documentation	Complete screening tool, checklist and obtain patient verbal consent 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. 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:	

11.2 Standing Order for the Administration of Tenecteplase for Management of ST Elevation Myocardial Infarction following NAT protocol

TITLE	Tenecteplase Standing Order for Nurse Administered Thrombolysis		
Drug	Tenecteplase (Metalyse®)		
Indication	Thrombolysis in a patient meeting the criteria for NAT and consenting to treatment		
Contraindications	Failure to meet ALL NAT eligibility screening criteria, AND/OR allergy or hypersensitivity to Tenecteplase		
Presentation[1]	40 mg and 50 mg vials		
Administration	Intravenous (IV) bolus over 10 seconds and flushed with 30 mL 0.9% sodium chloride. Tenecteplase is **incompatible with glucose solution.**		
Dose[2]	**Weight adjusted dosage:**		
	Patient weight:	**Patient age:**	
	Kg	**18 - 74 years**	**75 years and over**
	Less than 60 kg	30 mg = 6 mL	15 mg = 3 mL
	60–69 kg	35 mg = 7 mL	17 mg = 3.5 mL
	70–79 kg	40 mg = 8 mL	20 mg = 4 mL
	80–89 kg	45 mg = 9 mL	22 mg = 4.5 mL
	90 kg and above	50 mg = 10 mL	25 mg = 5 mL
NB: Half dose for **patients 75 years of age and over** and a patient weight is required			
Adverse effects[1] **relevant to NAT**	Bleeding, including bleeding at injection sites, internal bleeding, intracranial haemorrhage, aggravation of any bleeding tendency, reperfusion arrhythmias (usually self-limiting), cardiac arrest and hypotension		
Nursing implications	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 insitu		
Monitoring	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, SpO_2, 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.		
Documentation	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.		
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 Standing Order for the Administration of Enoxaparin Sodium (Clexane®) for Management of ST Elevation Myocardial Infarction following NAT protocol

<table>
<tr><th>TITLE</th><th colspan="2">Enoxaparin Sodium (Clexane®) Standing Order for Nurse Administered Thrombolysis</th></tr>
<tr><td>Drug</td><td colspan="2">Enoxaparin sodium (Clexane®)</td></tr>
<tr><td>Indication</td><td colspan="2">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 colspan="2">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[1]</td><td colspan="2">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 colspan="2">Intravenous (IV) and subcutaneous (SC)</td></tr>
<tr><td rowspan="3">Dose[2]</td><td colspan="2">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>
<tr><td colspan="3">NB: Patients 75 years of age and over do NOT receive an initial intravenous (IV) dose of enoxaparin sodium.</td></tr>
<tr><td>Adverse effects[1] relevant to NAT</td><td colspan="2">Bleeding, bruising and pain at injection site, thrombocytopenia, allergic reactions including urticaria and anaphylaxis.</td></tr>
<tr><td>Nursing Implications</td><td colspan="2">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.</td></tr>
<tr><td>Monitoring</td><td colspan="2">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.</td></tr>
<tr><td>Documentation</td><td colspan="2">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.</td></tr>
<tr><td>LHD Drug and Therapeutics Committee approval</td><td colspan="2">Date of approval

Name and signature:

Date for Review</td></tr>
</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

- **11.3.1 Enoxaparin Subcutaneous (SC) Dosage Table**

The enoxaparin subcutaneous dosage must be calculated according to the patients weigh 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 -74years or 75 years and over

Patient's weight	**18 - 74 years of age SC-1 mg/kg Max 100 mg**		**75 years of age & over SC- 0.75 mg/kg Max 100 mg**	
Kg	**mg**	**mL**	**mg**	**mL**
40	40	0.4	30	0.3
45	45	0.45	33.7	0.35
50	50	0.5	37.5	0.35
55	55	0.55	41.2	0.4
60	60	0.6	45	0.45
65	65	0.65	48.7	0.5
70	70	0.7	52.5	0.5
75	75	0.75	56.2	0.55
80	80	0.8	60	0.6
85	85	0.85	63	0.65
90	90	0.9	67.5	0.65
95	95	0.95	71.2	0.7
100	100	1	75	0.75
105	100	1	78.7	0.8
110	100	1	82.5	0.8
115	100	1	86.2	0.85
120	100	1	90	0.9
125	100	1	93.7	0.95
130	100	1	97.5	1
135	100	1	100	1

Adopted courtesy of NSW Ambulance June 2015

12 Dataset for STEMI: Reperfusion Model

12.1 Minimum Dataset for STEMI: Reperfusion Model

Page 1 of 2: Mandatory Data

Variable	Sect.	Definition	Format
Age	1		
Gender	1		
Date/ Time of Symptom Onset	1	*Onset of severe, sustained symptoms*	Date/Time
Type of First Clinical Contact	1	*Select Hospital Triage or Inpatient Consult*	Tick Box
Date/ Time of First Clinical Contact	1		Date/Time
Source of Diagnostic ECG	1	*Select Hospital*	Tick Box
Date/ Time of Diagnostic ECG	1		Date/Time
Date/Time of ECG Reading Service Contact	1	*Use time ECG was transmitted or faxed/emailed*	Date/Time
Presentation Source to this hospital	1	*Select "Community Self-Present " , " Hospital Transfer" or "Existing Inpatient"*	Tick Box
Date/Time of Arrival at this hospital	1	*Not applicable if existing inpatient at the time of STEMI*	Date/Time
OOH Cardiac Arrest	1		Yes/No
Patient Intubated	1		Yes/No
Thrombolysed	1	*Select NAT, IHT or Nil*	Tick Box
Date/ Time of Thrombolysis	1		Date/Time
Thrombolytic agent used	1	*Select tenecteplase or Other*	Tick Box
Transferred to Cath Lab Facility	1		Yes/No
Date/ Time of Transfer Request	1	*Time Ambulance/MRU contacted to request patient transfer*	Date/Time
Date/ Time of Transfer	1	*Time patient actually left facility*	Date/Time
Transfer Mode	1	*Select "Road Ambulance", "Helicopter" , "Fixed Wing"*	Tick Box

12.2 Recommended Dataset for STEMI: Reperfusion Model

Variable	Sect.	Definition	
Heart Rate	1	*First recorded HR (use ambulance data if available)*	
Systolic BP	1	*First recorded BP (use ambulance data if available)*	
Maximum ST Deviation	2	*Record lead & mm*	
Cardiac Biomarker (Type)	1	*Trop I, Trop T , Trop T-HS or CK*	Tick Box
Cardiac Biomarker (Assay) *	1	***Only required if** Trop I*	Tick Box
Cardiac Biomarker (Values)	3	*Record initial, 24 hr peak and URL*	
Creatinine	2	*Record baseline & peak values*	
FBC	3	*Record initial Hb, WCC & Platelets*	
Killip Class	2	*Select Class I – IV (include definition on form). Record on arrival + worst during admission*	Tick Box
IABP Required	1		Yes/No
Smoking History	1	*Select " Current " "Past " or " Never" Actively smoking within last month = current*	Tick Box
Hypertension	1	*Select YES if documented history prior to this admission*	Yes/No
Hyperlipidaemia	1	*Select YES if documented history prior to this admission*	Yes/No
Diabetes Mellitus	1	*Select YES if documented history prior to this admission*	Yes/No
Prior MI	2	*Select YES if documented in health care record. If YES, add date (month & year) if known*	Yes/No +
Prior PCI	2	*Select YES if documented in health care record. If YES, add date (month & year) if known*	Yes/No +
Prior CABG	2	*Select YES if documented in health care record. If YES, add date (month & year) if known*	Yes/No +
Family History of Premature CHD	1	*Select YES if parent or sibling diagnosed with CHD (male relative under 55, female relative over65)*	Yes/No
Atrial Fibrillation	1	*Select YES if documented history prior to this admission*	Yes/No
Previous TIA/Stroke	1	*Select YES if documented history prior to this admission*	Yes/No
Aspirin	2	*If YES, record date & time of first dose given (during this presentation)*	Yes/No +
Other Antiplatelet	3	*If YES, record name of agent + date & time of first dose given (during this presentation)*	Yes/No +
New Oral Anti- Coagulant (NOAC)	3	*If YES, record name of agent+ date & time of first dose given (during this presentation)*	Yes/No +
Statin Therapy	2	*If YES, record date & time of first does given (during this presentation)*	Yes/No
Interpreter Needed for Consent	1		Yes/No
In Hospital Outcome Data			
In Hospital Death	1		Yes/No
Re MI	1	*If YES, also select one of the options listed below*	Yes/No
	1	*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 <18/24 post index MI (excluding 1 or 2)* *4. Post CABG – myocardial biomarkers [Tn or CKMB>5X URL or new Q waves or new LBBB]*	
Major Bleeding	1	*Select YES if event requiring transfusion and/or decrease in HB by >4g/dl*	Yes/No
CVA	1		Yes/No

13 REFERENCES

- Australasian College for Emergency Medicine Policy on the Australian Triage Scale, P06, Version 4, 2013
- 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
- Clinical Information Access Portal (CIAP) http://www.ciap.health.nsw.gov.au/home.html (February 2015)
- Australian Medicines Handbook https://amhonline.amh.net.au.acs.hcn.com.au/chapters/chap-07/anticoagulants/acs.t
- MIMS Online, https://www.mimsonline.com.au.acs.hcn.com.au/Search/Search.aspx,
- Therapeutic Guidelines (eTG), http://etg.hcn.com.au/tablet/home.htm

- 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
- Nursing and Midwifery Board of Australia Fact Sheet – Context of practice for registered nurses and midwives, 2015, http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Context-of-practice-for-registered-nurses-and-midwives.aspx
- 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 - Chest Pain Evaluation (NSW Chest Pain Pathway) (PD 2011_037)
- 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 - Interpreters- Standard Procedures for Working with Health Care Interpreters (PD2006_053).
- NSW Health Policy Directive - Medication Handling in NSW Public Health Facilities (PD2013_043)

- 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:
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=GL2017_009

RN SUPPLY AND ADMINISTRATION OF STI THERAPIES IN PUBLICLY FUNDED SEXUAL HEALTH SERVICES (PD2020_024)

PD2020_024 rescinds PD2018_014

POLICY STATEMENT

NSW Health STI treatment protocol increases the likelihood that patients attending NSW Publicly Funded Sexual Health Services (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 Policy Directive outlines the mandatory requirements for implementation and utilisation of the state-wide Supply and Administration of Sexually Transmissible Infection (STI) Therapies under Protocol by Accredited Registered Nurses employed in NSW PFSHS.

SUMMARY OF POLICY REQUIREMENTS

STI treatment protocol authorises a Registered Nurse (RN) 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 uncomplicated STIs.

Patients and sexual partners are assessed against inclusion criteria.

If inclusion criteria are **not met** then a medical review must be sought.

This protocol is only for:

- The management of patients with a confirmed STI diagnosis (positive laboratory test result or by an accepted diagnostic criteria) and who meet the criteria specified

  OR

- 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 Services Standard Operating Procedures Manual*

Facilities must implement appropriate governance, identify and minimise the risks of adverse events as outlined under Implementation. Medication administration and documentation must be in accordance to *NSW Health 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 24 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.

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 7: Education Accreditation Clinical accreditation process of NSW Sexual Health Standard Operating Procedure.

To download the RN Supply and Administration of STI Therapies in Publicly Funded Sexual Health Services Policy and Procedures go to:
https://www1.health.nsw.gov.au/pds/Pages/doc.aspx?dn=PD2020_024