

Emergency Nurse Practitioner Health Management Protocol

for the

***Management of acute
presentations in the
adult population***

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Glossary of Terms

Acronym	Meaning
Red Stream	Redcliffe subacute trauma rapid evaluation and management
QNC	Queensland Nursing Council
GP	General Practitioner
PAD	Professional appraisal & development
DTP	Drug Therapy Protocol
HMP	Health Management Protocol
NP	Nurse Practitioner

Service Overview:

Redcliffe Hospital is part of the Metro North Health Service District. Redcliffe Emergency Department provides a 24 hour, seven day a week adult and paediatric emergency health service. The department is supported by specialist medical and nursing staff.

The department has a strong commitment to developing a multi-disciplinary team approach to providing emergency care. The department works collaboratively with the medical, surgical, paediatric, orthopaedic, allied and community health and gynaecological services to provide care for patients from presentation to discharge.

We enjoy positive partnerships with other services including General Practitioner Network ; Primary Care and Community Health Services, Allied Health, Queensland Police and Ambulance, and non government and community organisations.

Distance to our main referral hospital – Royal Brisbane and Women’s Hospital, is 30km.

Nurse Practitioners work in the *REDSTREAM* area of the emergency department: “*Redcliffe Subacute trauma rapid evaluation and management.*”

They provide a service 7 days per week.

Goals of Nurse Practitioner Service

Providing emergency care:

- Care that is timely; aimed at seeing selected subacute and non acute patients within benchmark times of the Australasian Triage Scale
- Care that results in the best possible clinical outcomes
- Emergency nurses may assist & support staff with other critically unstable, life threatening, limb/organ or person at risk, and acute presentations as required by the persons in charge of the department

Scope of Practice Statement

The nurse practitioner is responsible and accountable for making professional judgements about when the patient's condition is beyond their scope of practice and for initiating consultation with a medical officer or other member of the health care team.

Nurse Practitioners are Master of Nursing (Nurse Practitioner) prepared, endorsed by the QNC and appointed to the position of NP.

They have undergone full supervision during their candidate training. Newly appointed Nurse Practitioners work under supervision until deemed competent by the clinical team. Likewise Nurse Practitioners expanding their scope of practice will be supported by training and supervised until deemed competent.

Ongoing competency is maintained by reviewing selected patient presentations in a clinical team forum and by attending further educational opportunities internally and externally.

The nurse practitioner works collaboratively within the multi disciplinary team of the Emergency Department but are located in the REDSTREAM pod of the emergency department.

The nurse practitioner has the expertise to support referral to other health care professionals.

Target Population

This Health Management Protocol / Drug Therapy Protocol is for the management of subacute & non acute presentations in the adult population (adult prescribing commences at 13 years).

Ambulatory care patients as per REDSTREAM criteria agreed by the emergency department NP clinical team and are as follows in Table 1. Consultation with a senior medical officer will occur as required.

Items in the “yes” column are considered appropriate for the ED Nurse Practitioner. Those in the “no” column are complicating factors that may cause significant patient delays through Red Stream.

Table 1: Red Stream Criteria

GENERAL CONSIDERATIONS	NO	YES
<p>Red Stream has 2 monitored bays with pt trolleys & 4 chairs</p> <p>Alert: Assisting Dr/Nr will be utilised on resus team</p>	<ul style="list-style-type: none"> - Psychiatric problems - Rape Exam - Patients with known or suspected immunosuppression - Fever > 38.0 - Pt requiring repeat doses of IV narcotics 	<ul style="list-style-type: none"> - Pt treatment time approx 10-15 mins (linear time may be up to one hour) - Independent ambulation - OR - Ability to transfer from - Wheelchair
<p>Triage Discretion</p>	<p>Condition is a result of underlying medical problem which will require medical workup and/or admission - please ring the NP if in doubt</p>	<ul style="list-style-type: none"> - Any condition which, in the judgment of the triage person, can be addressed and disposition made in one hour – please ring the NP if in doubt

1. HEENT (Head, eyes, ear, nose and throat)	NO	YES
Face	<ul style="list-style-type: none"> - Neurological deficit eg altered sensation on face - Pt on Warfarin - Pt unable to open mouth fully 	<ul style="list-style-type: none"> - Suspected sinus origin - Minor trauma: contusion; abrasion; laceration
Minor Head Injury	<ul style="list-style-type: none"> - Adult > 50 yrs with history of loss of consciousness (any amount of time) - Pt vomiting - Pt with altered mental status - Pt on warfarin/Clopidogrel 	<ul style="list-style-type: none"> - Associated lacerations - No Loss of Consciousness - Scalp contusion
Earache/ Earlobe	<ul style="list-style-type: none"> - Spreading cellulitis - Obvious facial/neck swelling on side of ear ache 	<ul style="list-style-type: none"> - Ear ache - Foreign body
Toothache	<ul style="list-style-type: none"> - Associated facial cellulitis - Fever > 37.5 	<ul style="list-style-type: none"> - Dental Pain
Eyes	<ul style="list-style-type: none"> - Chemical splashes (Cat 2) - Significant vision impairment/loss - Periorbital cellulitis - Obvious injury to globe - Penetrating eye injury - Suspected eye disease eg glaucoma 	<ul style="list-style-type: none"> - Corneal abrasions - Local infections conjunctivitis, eye irritation, stye, etc. - Foreign bodies - Eye reviews - Welding flash
Nose	<ul style="list-style-type: none"> - Acute Epistaxis - Pt on Warfarin 	<ul style="list-style-type: none"> - Foreign bodies - Minor trauma
Throat	<ul style="list-style-type: none"> - Severe pain with trismus - Dehydration or unable to swallow any fluids 	<ul style="list-style-type: none"> - Sore throat

	<ul style="list-style-type: none"> - Potential for compromised airway - T > 37.5 	
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2. MUSCULOSKELETAL	NO	YES
Back Pain	<ul style="list-style-type: none"> - >50yrs age - Fever >37.5 - Pt not mobile - MVA/MBA - Direct trauma causing severe pain - Neurologic deficit - Chronic incapacity - Pain clinic patient 	<ul style="list-style-type: none"> - Minor Trauma & patient is ambulatory - Acute twisting/lifting injury
Neck pain	<ul style="list-style-type: none"> - >50yrs age - Fever >37.1 - Pt not mobile - MVA/MBA - Direct trauma causing central neck pain - Neurologic deficit - Chronic incapacity - Pain clinic patient 	<ul style="list-style-type: none"> - Most likely muscular origin
Hip Pain	<ul style="list-style-type: none"> - >50yrs age - Fever >37.1 - Pt not mobile - MVA/MBA - Neurologic deficit - Chronic incapacity - Pain clinic patient 	<ul style="list-style-type: none"> - Minor trauma and patient is ambulatory
Lacerations	<ul style="list-style-type: none"> - Forensic wounds - Significant neurovascular / tendon injury indicating potential threatened limb 	<ul style="list-style-type: none"> - Lacerations/skin tears - Suture/staple removal - Wound checks
Extremity trauma	<ul style="list-style-type: none"> - Extremity deformity - Vascular or Neurological compromise - Febrile patient >37.5 with swollen joint with no Hx of trauma (potential septic joint) 	<ul style="list-style-type: none"> - Puncture wounds - Contusions / haematomas & abrasions - End digit crush injuries - Superficial foreign body eg body piercing; fishhooks; nails etc. - Swelling of a joint from trauma

		<ul style="list-style-type: none"> - Sprain/Strain - Nail Avulsion - Ingrown Toe Nail
Burns	<ul style="list-style-type: none"> - Third degree burn > 1% - Circumferential burns of <ul style="list-style-type: none"> - hand or digits - Facial burns greater than first degree - Genitalia burns – any degree 	<ul style="list-style-type: none"> - First and second degree burns up to 5% TBSA (total body surface area)
<p>Skin</p> <p>Skin Continues...</p>	<ul style="list-style-type: none"> - Cellulitis with more than one co-morbidity - Pt with IDDM (Insulin Dependent Diabetes Mellitis) - Abscess requiring incision & drainage high risk areas: <ul style="list-style-type: none"> Breast Perirectal/perianal Facial Groin Axilla Related to prosthesis Skin reactions / rash with fever, shortness of breath, or petechiae Snake bite that may require antivenom and prolonged observation Stone fish / Bullrout injury that may require antivenom and prolonged observation 	<p>Local cellulitis with fever <37.5</p> <ul style="list-style-type: none"> - Rash without fever or other systemic symptoms - Eczema/dermatitis - School sores - Herpes simplex - Herpes Zoster - Mild allergic reaction <p>Insect bites / stings Animal / reptile / human bites</p> <p>Marine stings inc jellyfish & stinging fish without systemic symptoms</p> <p>Isolated Lump/lesion in pt with no fever</p>
3. CHEST	NO	YES
Pulmonary	<ul style="list-style-type: none"> - >50yo - Fever >37.5 	<ul style="list-style-type: none"> - Asthma (pt with known asthma) & temp < 37.5

	<ul style="list-style-type: none"> - Sats \leq 96% - Unequal Breath Sounds - IDDM - Suspected pneumonia 	<ul style="list-style-type: none"> - Cold/flu symptoms without rash or extreme lethargy or significant co-morbidities
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4. GIT/Genitourinary	NO	YES
Genitourinary	<ul style="list-style-type: none"> Fever $>$37.5 $>$50 yo Abdominal or pelvic pain Suspected kidney stone Testicular complaints Problems w/pregnancy Vaginal bleeding - with known pregnancy 	<p>Female Urinary frequency, urgency</p> <p>Mastitis (afebrile pt who is breast feeding)</p>

5. PEDIATRICS	NO	YES
Paediatric HMP to be developed for $<$ 13yrs	<ul style="list-style-type: none"> - Congenital syndromes - Reportable child safety issue identified by triage staff - Child requires ongoing medications 	<ul style="list-style-type: none"> - Patients who fit adult REDSTREAM criteria & the child will require no ongoing medications

6. Miscellaneous non acute presentations	NO	YES
CNC urology / NP candidate can be contacted for all IDC/supra pubic issues	<ul style="list-style-type: none"> - Pt with IDC & fever or confusion & is $>$50yrs 	<ul style="list-style-type: none"> - Simple IDC problems and Pt has no fever - Request for referral eg # clinic, physio - Request for certificate - Plaster cast problems - Review by specialty eg ortho, surgeon - Patients who can wait in the waiting room for review of results eg xray; bloods

Assessment and Management Framework

Patient Assessment

- Obtains relevant health history
- Performs appropriate physical examination
- If the assessment reveals that the care the patient requires is beyond the scope of the nurse practitioner the patient will be referred to a medical officer
- Identifies health risks
- Applies crisis intervention when indicated

Investigations includes, though not limited to:

- pathology
- medical imaging
- Identifying non-pharmacological interventions
- Identifying patient education opportunities

Diagnosis

- Formulates appropriate diagnosis and differential diagnosis based on clinical findings
- Identifies individual requirements to access health data from relevant persons
- Identifies individual requirements to access health care services to support the implementation of acute care

Intervention

- Accurately conducting and interpreting diagnostic tests
- Prescribing non-pharmacological therapies
- Prescribing pharmacological agents
- Conducting advanced nursing skills and procedures
- Making appropriate referrals to other health care professionals and community agencies
- Establishing a treatment plan
- Providing relevant patient and/or family health promotion/restoration education

Follow Up

If the patient condition does not allow total self care the nurse practitioner is responsible to advise / refer patients to follow up with their GP or return to ED / community services if any issues arise from their acute health issues such as:-

- GP or ED follow up (FU) while on pharmacological therapy eg antibiotics; analgesics; and/or wound care; burns etc
- Community FU for wounds; home ward intravenous antibiotics; acute care services as outlined:
 - * CHIP (Community Hospital Interface Program)
 - * HBACS (Home Based Acute Care Service)

- * CAPAS (Community and Post Acute Service)
- * Transitional care

REFERRAL:

The nurse practitioner role includes assessment and management of clients using nursing knowledge and skills and may include but is not limited to:

- the direct referral of clients to other health care professionals
- prescribing medications
- requesting diagnostic investigations

Referral pathways include internal & external allied health & community services, GPs, private specialist services, and speciality services for acute need in other hospitals namely RBWH such as burns, maxillary-facial, ophthalmology, and plastic surgery . The NP consults with the supervising emergency consultant prior to referral to another health care facility.

Nurse practitioners refer patients to public fracture clinics.

Currently in Australia nurse practitioners do not have access to a Medicare provider number. Consequently, until change occurs, a referral from a nurse practitioner may cause patient financial disadvantage if they are referred privately. To ensure that patients are not financially disadvantaged all private referrals from the nurse practitioners will be completed in collaboration with a senior medical officer with a provider number.

The nurse practitioner will refer/consult with a medical officer in the following clinical situations:

- persistent signs and symptoms despite treatment
- symptomatic or laboratory evidence of previously unidentified, decreased or decreasing function of any vital organ or system
- signs of recurrent or persistent infection
- any atypical presentation of a common illness or unusual response to treatment
- all potentially life threatening situations
- when a patients condition deteriorates unexpectedly
- when further clinical input is required to safely manage the patient
- referral to another health care facility is required
- prescription for discharge medications is required

Prescribing arrangements

- NPs may give a written order on the medication sheet for another nurse to administer a drug that is contained within this HMP.

- Medical officer consult and assistance if a prescription is required for patient discharge

Diagnostic Medical Imaging

Radiology
All plain film radiology
Ultrasound

Nurse practitioners may request plain film diagnostic radiography and ultrasound as relevant to the patient condition being assessed / treated.

Pathology

The nurse practitioner may request pathology tests as relevant to assist with planning patient treatment within the guidelines of the department's existing policies.

Drug Therapy Protocol

- Choice of pharmacological therapy must be guided by the Therapeutic Guidelines and Australian Medicines Handbook, within the parameters of the Standard Drug List for Queensland Hospitals
- The General Practitioner is the lead clinician for the co ordination of the patients care and thus any new medications, titration of medications and recommended discontinuation of medications must be communicated to them
- The nurse practitioner must verify that the choice of drug is suitable for the patient after carefully considering the following individualised patient information such as,
 - age
 - previous allergies
 - adverse drug reactions
 - co-morbidities such as renal and hepatic dysfunction
 - concomitant medications for potential drug interactions
 - pregnant and or lactating women

High Risk Medications

The Queensland Health Safe Medication Practice Unit has identified specific medications and patient groups where extra precautions are necessary. These groups are listed below and must be considered carefully when selecting other drug treatment to avoid adverse medication events.

- drugs with a narrow therapeutic range i.e. digoxin, lithium
- drugs requiring specialised monitoring or interpretation i.e. therapeutic dose monitoring
- anticoagulants
- cytotoxics
- NSAIDS or COX-2 inhibitors
- opiate analgesics
- aminoglycosides
- anti-epileptics
- insulin
- IV electrolyte supplementation
- weekly dosing regimens i.e. methotrexate

High Risk Patient Groups

- renal impaired
 - cardiac disease
 - liver disease
 - transplantation
 - mental health presentations
 - cancer
 - paediatrics
 - elderly
 - pregnant and breastfeeding
-
- Currently in Australia nurse practitioners do not have access to the pharmaceutical benefits scheme. Consequently, until change occurs a prescription from a nurse practitioner may cause the patient financial disadvantage. To ensure that patients are not financially disadvantaged arrangements for dispensing of the nurse practitioner prescription are as follows:
 - Patient's prescriptions will be issued by a medical officer
 - A copy of the approved HMP/DTP will be available in the pharmacy for identification and signatory purposes for emergency department treatments and inpatient orders

Evaluation

HMP/DTP:

- Review yearly by clinical team and resubmitted to NP Metro North HSD committee or earlier if any change to the service or population
- Clinical team (consisting of at least one medical officer, one pharmacist, one NP) audit of NP patient management in relation to prescribing – 3 charts per months per NP.

Nurse practitioner service:

- Review of Red Stream service waiting times, types of patient presentations and acuity (monthly report)
- Medical Imaging requests / accuracy of results
- Documenting variance of assessment and management process for patients reviewed in the clinical team forum
- PAD cycle includes review against NP national competencies
- Patient satisfaction survey yearly over one selected month

Pharmacological Therapy

- 1. Antibiotics**
- 2. Analgesics**
- 3. Anaesthetic agents**
- 4. Antiemetics**
- 5. Fluid therapy**
- 6. Corticosteroids**
- 7. Respiratory**
- 8. Vaccinations / Antivenoms**
- 9. Antispasmodics, Laxatives and Antidiarrhoeals**
- 10. Anti-Histamine**
- 11. Emergency Treatment**

1. Antibiotics

Generic Name	Form	Indication, Dose Schedule and Duration of Drug Supply
Amoxicillin trihydrate	Capsule	AMH section 5.1.8
Amoxicillin trihydrate; with Potassium clavulanate	Tablet	AMH section 5.1.8
Amoxicillin trihydrate; with Potassium clavulanate (Augmentin Duo Forte)	Tablet	AMH section 5.1.8
Cephalexin	Capsule	AMH section 5.1.3
Dicloxacillin sodium	Capsule	AMH section 5.1.8
Doxycycline	Tablets	AMH section 5.1.11
Erythromycin	Tablet or capsule	AMH section 5.1.6
Flucloxacillin	Capsules	AMH section 5.1.8
Metronidazole	Tablet	AMH section 5.1.7
Penicillin: Phenoxymethyl	Tablet	AMH section 5.1.8
Roxithromycin	Tablet	AMH section 5.1.6
Trimethoprim	Tablet	AMH section 5.1.13
Cephalothin sodium	Vial	AMH section 5.1.3
Ampicillin sodium	Vial	AMH section 5.1.8
Benzylpenicillin sodium	Vial	AMH section 5.1.8
Cephazolin	Vial	AMH section 5.1.3
Ceftriaxone	Vial	AMH section 5.1.3
Flucloxacillin	Vial	AMH section 5.1.8
Metronidazole	I.V	AMH section 5.1.7
Sofradex (Framycetin, Dexamethasone, Gramicidin)	Ear drop	AMH section 9.1.2
Chloramphenicol 0.5%	Eye drop	AMH section 11.1.3
Chloramphenicol 1%	Eye ointment	AMH section 11.1.3
Mupirocin	Ointment	AMH section 8.3.3
Probenecid (to increase and prolong plasma levels of penicillins and cephalosporins)	Tablet	AMH section 15.3

2. Analgesics (includes one antidote at opioid receptors)

Generic Name	Form	Indication, Dose Schedule and Duration of Drug Supply
Paracetamol (Adult)	Tablet	AMH section 3.1
Ibuprofen (Adult)	Tablet	AMH section 15.1.1
Paracetamol 500mgs/Codeine 8mgs	Tablet	AMH section 3.1 and 3.2
Paracetamol 500mgs/Codeine 15mgs	Tablet	AMH section 3.1 and 3.2
Paracetamol 500mg/Codeine 30mg	Tablet	AMH section 3.1 and 3.2
Paracetamol suppository	Suppository	AMH section 3.1
Indomethacin	Suppository	AMH section 15.1.1
Oxycodone Schedule 8	Tablet	AMH section 3.2
Morphine Schedule 8	Injection	AMH section 3.2
Fentanyl Schedule 8	Injection	AMH section 3.2
Oxygen/Nitrous Oxide	Gas	AMH section 2.2
Naloxone	Injection	AMH section 4.2

3. Anaesthetic agents

Generic Name	Form	Indication, Dose Schedule and Duration of Drug Supply
Lignocaine 1%	Injection	AMH section 2.5.1
Lignocaine 1% with Adrenaline 1:100,000	Injection	AMH section 2.5.1
Lignocaine 2%	Injection	AMH section 2.5.1
Oxybuprocaine	Eye drop	AMH section 11.5.3

4. Antiemetics

Generic Name	Form	Indication, Dose Schedule and Duration of Drug Supply
Metoclopramide	Tablet	AMH section 12.3.1
Metoclopramide hydrochloride	Injection	AMH section 12.3.1
Prochlorperazine maleate	Tablet	AMH section 12.3.1
Prochlorperazine maleate	Injection	AMH section 12.3.1

5. Fluid therapy

Generic Name	Form	Indication, Dose Schedule and Duration of Drug Supply
Sodium Chloride 0.9%	Intravenous Fluid	Written order in ED only not to exceed 2 litres

6. Corticosteroids

Generic Name	Form	Indication, Dose Schedule and Duration of Drug Supply
Hydrocortisone 1%	Cream	AMH section 8.1.1
Hydrocortisone	Injection	AMH section 14.5.2
Prednisolone	Tablet	AMH section 14.5.2

7. Respiratory

Generic Name	Form	Indication, Dose Schedule and Duration of Drug Supply
Salbutamol	Solution	AMH section 19.1.1
Salbutamol	MD Inhaler	AMH section 19.1.1
Ipratropium – Bromide	Solution	AMH section 19.1.2

8. Vaccine and Immunoglobulin

Generic name	Form	Indication, Dose Schedule and Duration of Drug Supply
Diphtheria tetanus toxoid (Adult ADT)	Injection	AMH section 20.1
Tetanus Immunoglobulin	Injection	AMH Appendix A Immunoglobulins

9. Antispasmodic agent, Laxatives and Antidiarrhoeals

Generic name	Form	Indication, Dose Schedule and Duration of Drug Supply
Sodium Citrate 450mg, sodium laurel sulfoacetate	Squeeze Bottle	AMH section 12.4.3

45 mg, sorbitol 3125 mg, sorbic acid - Microlax enema		
Hyoscine Butylbromide	Injection	AMH section 12.2

10. Anti Histamine

Generic name	Form	Indication, Dose Schedule and Duration of Drug Supply
Promethazine	Tablet	AMH section 12.3.2
Promethazine	Injection	Written order in ED AMH section 12.3.2
Loratadine	Tablet	AMH section 1.2.2

11. Emergency Treatment

Generic name	Form	Indication, Dose Schedule and Duration of Drug Supply
Adrenaline	Injection	AMH section 1.1 Written order in an Emergency situation only
Glucose 50%	Injection	AMH section 10.1 Written order in an Emergency situation only
Glucagon	Injection	AMH section 10.1.3 Written order in an Emergency situation only
Benztropine	Injection	AMH 16.2.2 Written order in an Emergency situation only for acute dystonic reaction

References:

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Queensland Health and Royal Flying Doctor Service, 2007. 5th Edition. *The Primary Clinical Care Manual*, Queensland Health, QLD.

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Therapeutic Guidelines, 2006: Antibiotics. <http://etg.hcn.net.au>

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Therapeutic Guidelines, 2008: Emergency Medicine. <http://etg.hcn.net.au>

Therapeutic Guidelines, 2007: Oral and Dental. <http://etg.hcn.net.au>

HMP/DTP developed by:

Name	Signature	Date
(Director ED)		
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Endorsed by
DDON/Chair, District Nurse Practitioner Steering Committee

Signature: Date: / /

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District Manager

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FINAL APPROVAL
CHAIR, Queensland Nurse Practitioner Advisory Committee

Signature: Date: / /

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