

SCOPE: Western Australia

SETTING

Silver Chain Group provides advanced nursing guidance and intervention to ensure the best possible outcome for clients with complex or chronic wounds or stomas.

This document provides clinical practice guidelines for the nurse practitioner in wound/ostomy management.

NURSE PRACTITIONER ROLE

The Nurse Practitioner (NP) is a registered nurse educated and authorised to function autonomously and collaboratively in an advanced and extended clinical role. The NP role includes the assessment and management of patients using nursing knowledge and skills and may include but is not limited to initiation of diagnostic investigation, prescribing of medications and direct referral of patients to other health care professionals.

The main aims of the role are to:

- Undertake comprehensive assessments for formulation of diagnosis and management.
- Provide an expert level of coordinated clinical care.
- Ensure patient safety and appropriateness of wound/ostomy management inclusive of physical assessment, review and admission of patients referred to the AWAS
- Review and evaluate therapeutic management plans in collaboration with the client and medical practitioners.
- Ensure clinical compliance with contemporary evidence-based guidelines.
- Provide expert clinical leadership for staff members within the community setting.
- Support the prevention of unnecessary admission to emergency departments.

The Nurse Practitioner (NP) role is guided by the following Acts and Regulations:

- Health Practitioner Regulation National Law Act 2010
- Pharmacy Act 2010
- Medicines and Poisons Act 2014
- Medicines and Poisons Regulations 2016
- Medicare Benefits Schedule
- Pharmaceutical Benefits Scheme

The following guidelines outline the systematic review process and scope of practice for the NP.

Table 1: Clinical practice guideline – Wound

Process	Action	Guidance
Referral Criteria	<p>Referrals can be received from:</p> <ul style="list-style-type: none"> Enrolled Nurse/Registered Nurse (in consultation with CON/CNCM) Clinical Nurse Coordinators Clinical Nurse Consultant Managers 	<ul style="list-style-type: none"> Wound present for >6weeks despite optimal treatment interventions and/or Wound aetiology undetermined or does not complement clinical assessment. Advanced debridement methods are required Wound/patient complexity warrants review.
Assessment	<p>A complete history is taken.</p> <p>Assess for factors that may delay or inhibit wound healing</p>	<p>Patient History</p> <ul style="list-style-type: none"> Presenting complaint Treatment history Medical, surgical, allergy history Wound history Current medications (prescribed and over the counter [OTC]) Previous diagnostic investigations Social and occupational history Activities of daily living/carer support Interdisciplinary involvement
Examination	<p>Physical examination of the wound/stoma and associated area/limb.</p> <p>More generalised assessment as needed. Explore differential diagnosis.</p>	<p>Physical examination</p> <ul style="list-style-type: none"> Clinical features of the wound and skin Presence of other wounds/lesions Pain assessment Vascular assessment as indicated Peripheral neurological examination (eg using Semmes Weinstein 10g monofilament, tendon reflexes, vibration) Signs and symptoms of infection Signs of autoimmune disease Signs of neoplastic disease. Footwear (neuropathic, lower limb wounds). Physical and joint mobility Systems examination as required
Investigations	<p>Determine which investigations may be required to assist in a diagnosis or provide a baseline health assessment</p>	<p>Pathology</p> <p>Haematology</p> <ul style="list-style-type: none"> FBP, ESR, CRP, INR <p>Biochemistry</p> <ul style="list-style-type: none"> U&Es LFT (Total Protein, Albumin), pre-albumin Glucose, HbA1c Lipids Thyroid Function <p>Microbiology and Histology</p> <ul style="list-style-type: none"> Wound fluid/swabs – microscopy, culture and sensitivity (MC&S), PCR Tissue biopsy – MC&S and histopathology Skin scraping, immunofluorescence

Process	Action	Guidance
	<p>Referral for:</p> <p>Arterial Duplex Scan: To determine presence and/or severity of arterial disease in the lower limb</p> <p>Venous Duplex Scan: To determine disease or impairment of superficial, deep, and perforating veins and valves.</p> <p>Bone Scan/MRI If there is a suspicion of osteomyelitis, or underlying structural damage then client will be referred to General Practitioner and/or appropriate Medical Specialist for further investigations/interventions which may include bone scan/MRI</p>	<p>Guidance</p> <p>Biopsy This may be required if the wound has been non-healing, despite optimal treatment, for greater than 4 weeks; or the wound duration is greater than 6 months; and/or is assessed as atypical.</p> <p>Vascular</p> <ul style="list-style-type: none"> • Ankle Brachial Pressure Index (ABPI) • Systolic Toe Pressures (Photoplethysmography[PPG]) • Toe/Brachial Pressure index (TBPI) • Venous refilling time (PPG) <p>Radiology/Medical Imaging</p> <ul style="list-style-type: none"> • X-Ray • Ultrasound (soft tissue) <p>ABPI performed on all clients with a lower leg ulcer. If the ABPI does not complement the clinical assessment or is inconclusive then further diagnostic investigation may be required.</p> <p>Toe Pressures /TBPI Performed on clients:</p> <ul style="list-style-type: none"> • Where ABPI is unable to be completed or vessels are incompressible due to calcification. • To measure arterial perfusion in the toes and feet as seen in clients with diabetes, renal disease or with ABPI of greater than 1.2 <p>Guidance</p> <ul style="list-style-type: none"> • WA Health Diagnostic Imaging Pathways http://imagingpathways.health.wa.gov.au/
Diagnosis	Make provisional diagnosis	On clinical picture, available assessment data and results of investigations.
Management	<p>Nurse Practitioner:</p> <p>Non-pharmacological treatment</p> <p>Pharmacological treatment</p> <p>Client education for self-care</p>	<p>Non-pharmacological treatment</p> <ul style="list-style-type: none"> • Appropriate dressings and/or compression therapy based on diagnosis and client assessment. • Cleansing and debridement of wound (conservative sharp wound debridement and/or low frequency ultrasonic wound debridement). <p>Client/Carer education for self-care</p> <ul style="list-style-type: none"> • Disease process and health maintenance • Treatment regimen • Skin care regimen • Diet (the importance of essential vitamins and minerals as required). • Indications to seek medical assistance • Lifestyle changes • Prevention of recurrence • Pain management • Medication management (includes relevant consumer handouts)

Process	Action	Guidance
	<p>Urgent Referrals:</p> <ul style="list-style-type: none"> • Life/limb threatening infection • Acute ischaemic changes • Abnormal test results that require medical intervention • Treatment required outside the NP scope of practice • Acute DVT • New client with an ABPI <0.7 or ankle systolic <80mmHg or Toe pressure <60mmHg/TBPI <0.6 • Client that requires surgical intervention • Ulcers on a high-risk foot have immediate referral to MDFU Clinic • Significant deterioration in wound since last review 	<p>Pharmacological Treatments</p> <ul style="list-style-type: none"> • Analgesics • Topical antimicrobials • Topical anaesthetics • Local anaesthetics • Topical corticosteroids • Topical antibiotics/antifungals • Oral antibiotics • Oral nutritional supplements • Moisturisers and skin barriers • Skin cleansers <p>Notify medical practitioners of investigations ordered and referrals organised.</p> <p>Referrals</p> <p>If the wound fails to heal despite optimal therapy then consultation with other health care practitioners and further investigations may be required at that time</p> <p>Guidance</p> <ul style="list-style-type: none"> • AMH Online, Australian Medicines Handbook http://www.amh.net.au • Australian and New Zealand Clinical Practice Guideline for Prevention and Management of Venous Leg Ulcers, 2011. http://woundsaustralia.com.au/publications <i>Currently being revised.</i> • Electronic Therapeutic Guidelines (eTG) (encompassing Antibiotic, Dermatology, Ulcer and Wound Management) https://www.tg-org-au • European Wound Management Association (EWMA) – Position documents. http://ewma.org/resources • MIMS online https://www.mimsonline.com.au/Search/Search.aspx • National Evidence-Based Guideline on the Prevention, Identification and Management of Foot Complications in Diabetes (Part of the Guidelines on Management of Type 2 Diabetes) 2011. Melbourne Australia. (<i>Currently being revised</i>). • National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline, 2014. http://woundsaustralia.com.au/publications • International Wound Infection Institute (IWII) Wound Infection in clinical practise. Wounds International 2016. http://woundinfection-institute.com • Pharmaceutical Benefits Scheme www.pbs.gov.au • Therapeutic Goods Administration, Australian Government; Department of Health and Ageing http://www.tga.gov.au • WA State-wide Medicines Formulary (Formulary One) https://formulary.hdwa.health.wa.gov.au • World Union of Wound Healing Societies (WUWHS)

Process	Action	Guidance
		<p>– position documents. http://www.wuwhs.org</p> <ul style="list-style-type: none"> Wounds Australia: Standards for Wound Prevention and Management. 3rd Edition. Cambridge Media: Osborne Park, WA; 2016 http://woundsaustralia.com.au/publications
Management Partnerships	Appropriate referrals to assist in overall client management	<p>Other Health Care Professionals as required:</p> <p>Medical</p> <ul style="list-style-type: none"> General Practitioner Vascular Surgeon Plastic Surgeon Dermatologist Infectious Diseases Physician Endocrinologist Orthopaedic Surgeon Colorectal Surgeon Palliative Care Mental Health Services <p>Allied Health</p> <ul style="list-style-type: none"> Podiatrist Diabetic Educator Occupational Therapist Physiotherapist Dietitian Pharmacist Lymphoedema Specialist Services <p>Community Care Providers</p> <ul style="list-style-type: none"> Silver Chain Nurses Silver Chain Home Support Service Other Home Care Providers Aged Care Assessment Team Community Aides and Equipment Program
On-going Management	Follow-up	<p>Review as appropriate:</p> <ul style="list-style-type: none"> Adjust treatment plan in accordance with investigative results Wound debridement treatments according to client response
Separation	Discharge from Nurse Practitioner Service	<ul style="list-style-type: none"> Ongoing management by Silver Chain Nurses for management Referral to Specialist Care

CLINICAL PRACTICE GUIDELINE - MINOR SURGICAL PROCEDURES

There are occasions where either wound biopsy, sharp debridement procedures, or low frequency ultrasonic debridement are indicated.

Biopsy

Skin and wound biopsy are used for diagnosis and may identify the presence (or absence) of various skin conditions or diseases. In addition, biopsy may be performed for semi-quantitative bacteriology where surface swabs are inadequate.

Biopsy may be considered for lesions suspicious of malignancy where there is increase size, malodour and pain, have excess granulation tissue, bleeding, or drainage, are exophytic, or have an irregular base or margin. The procedure involves prior assessment of the wound or lesion, preparation of the client, cleansing of the area and anaesthetisation with local anaesthetic. There are various methods of biopsy and in this instance the preferred options are punch or incisional biopsy.

Debridement

Debridement is the removal of devitalised (non-viable) tissue, particulate matter and foreign material. It may be undertaken to remove contaminated, dead and damaged tissue that may inhibit healing or contribute to infection in the wound. In addition, debridement is considered to prepare a wound for skin grafting, application of skin substitutes, or topical negative pressure therapy.

The ultimate aim of debridement is to obtain a clean healthy wound bed to allow rapid and effective healing. The decision to undertake this procedure requires consideration of both local and systemic factors. These include but are not limited to knowledge of underlying anatomical structures, local tissue perfusion, the presence of active inflammatory disease, the presence of impaired clotting or use of anticoagulation medication, and the presence of malignancy (Carville, 2017).

The outline of assessment process, investigations and management are outlined in Table 2.

Table 2: Assessment and Management: Minor Surgical Procedures

Process	Action	Guidance
History	A complete history is taken	As per Clinical practice guideline - Wound
Examination	Physical examination of the wound and associated area/limb More generalised assessment as necessary	Findings from assessment of complex, infected wounds, leg ulcers and neuropathic foot ulcers. Abnormal clinical presentation <ul style="list-style-type: none"> • Raised/unusual clinical features • Suspicion of neoplastic disease • Senescent tissue • Hypergranulation tissue • Non healing despite optimal treatment Presence of: <ul style="list-style-type: none"> • Infection not responding to antibiotic treatment • Contaminated/non-viable material • Foreign bodies
Investigations	Biopsy of wound for histology and/or microbiology	Histology <ul style="list-style-type: none"> • To confirm wound aetiology Microbiology <ul style="list-style-type: none"> • To identify organisms and sensitivities
Diagnosis	Make a provisional diagnosis	On clinical picture, available assessment data and results of investigations
Management	In addition to Clinical Practice Guideline - Wound Conservative, Sharp or Low Frequency Ultrasonic Debridement (LFUD) LFUD Requires at least weekly debridement for period of 4-6 weeks subject to individual response of treatment	To remove <ul style="list-style-type: none"> • Contaminated material • Foreign bodies • Non-viable, colonised tissue/biofilm To stimulate <ul style="list-style-type: none"> • Wound healing • Bactericidal effects To prepare wound environment for: <ul style="list-style-type: none"> • Topical negative therapy • Surgical closure • Healing by secondary intention • Skin grafts • Substitutes to accelerate the healing process
Management Partnerships	Appropriate referrals to assist in overall management	As per Clinical practice guideline - Wound
On-going Management	Follow up	Review as appropriate <ul style="list-style-type: none"> • Test results • Review treatment plan in accordance with investigative results • Monitor response to treatment

Process	Action	Guidance
Separation	Discharge from NP service	As appropriate: <ul style="list-style-type: none"> Wound healing achieved Ongoing care by Silver Chain clinical nurses Referral for Specialist care

Table 3: Clinical practice guideline: Ostomy diagnostics and treatment

Process	Action	Guidance
Referral Criteria	Referrals can be received from: <ul style="list-style-type: none"> Silver Chain Nurses Stomal Therapy Nurses Medical Practitioners <p>*NB: It may be appropriate that when a referral is received other than from a Silver Chain Stomal Therapy Nurse, that the NP arranges a Silver Chain Stomal Therapy Nurse to conduct initial assessment to determine if NP involvement is necessary.</p>	<ul style="list-style-type: none"> Complex high output fistula/stoma Presentation of atypical stoma/peri-stoma lesions Request from Silver Chain Stomal Therapy Nurses when current management plan ineffective despite optimal treatment interventions.
Assessment	A complete history is taken	<ul style="list-style-type: none"> As per Clinical practice guideline – Wound/Stoma history Stoma output and frequency
Examination	Physical examination of the stoma, mucocutaneous junction and peristomal area. More generalised assessment as needed Explore differential diagnosis	Physical Examination <ul style="list-style-type: none"> Clinical features of the stoma, mucocutaneous junction and skin Presence of other wounds/lesions Stoma/Wound Assessment Signs and symptoms of dehydration Signs and symptoms of infection
Investigations	Determine which investigations may be required to assist in a diagnosis or provide a baseline health assessment	As per Clinical practice guideline – Wound +/- Pathology <ul style="list-style-type: none"> Urine M/C/S Stool Culture Radiology/Medical Imaging <ul style="list-style-type: none"> Abdominal ultrasound/Abdominal X-Ray

Process	Action	Guidance
Diagnosis	Make provisional diagnosis	On clinical picture, available assessment data and results of investigations.
Management	<p>Urgent Referrals:</p> <ul style="list-style-type: none"> Abnormal test results that require medical intervention Treatment required outside the NP scope of practice Client that requires surgical intervention Significant deterioration in stoma/peristomal wound since last review 	<p>Referrals</p> <p>If the stoma/peristomal condition fails to respond despite optimal therapy then consultation with other health care practitioners and further investigations may be required at that time</p>
Management Interventions	<p>Nurse Practitioner</p> <p>Non-pharmacological treatment</p> <p>Pharmacological Treatment – based on diagnostic investigations, clinical assessment and Therapeutic guidelines</p> <p>Client education for self-care</p>	<p>Non-pharmacological treatment</p> <ul style="list-style-type: none"> Appropriate dressings and/or appliance systems based on client assessment <p>Client/Carer education for self-care</p> <ul style="list-style-type: none"> Disease process and health maintenance Treatment regimens Skin care regimens Diet/fluid intake Indications to seek medical help Lifestyle changes Pain management Medication (includes relevant consumer handouts) <p>Pharmacological Treatments</p> <ul style="list-style-type: none"> Analgesics Topical antimicrobials Topical anaesthetics Local anaesthetics (for biopsy) Topical corticosteroids Topical antibiotics/antifungals Oral antidiarrhoeals Aperients Oral antibiotics Oral nutritional supplements Oral and subcutaneous rehydration therapy <p>Guidance</p> <ul style="list-style-type: none"> AASTN Standards Guidelines and Position Statements http://stomalththerapy.com/standards_guidelines.php ASCN Stoma Care National Clinical Guidelines (UK) (2016) http://ascnuk.com/wp-content/uploads/2016/03/ASCN-Clinical-Guidelines-Final-25-April-compressed-11-10-38.pdf National Institute for Health and Care Excellence (Stoma Guidelines) https://www.evidence.nhs.uk/search?q=stoma%20guidelines

Process	Action	Guidance
Management Partnerships	Appropriate referrals to assist in overall client management	<p>Other Health Care Professionals as required:</p> <p>Medical</p> <ul style="list-style-type: none"> • General Practitioner • Colorectal Surgeon • Urologist • Gastroenterologist • Gynecologist • Dermatologist • Infectious Diseases Physician • Palliative Care • Mental Health Services <p>Allied Health</p> <ul style="list-style-type: none"> • Diabetic Educator • Occupational Therapist • Physiotherapist • Pharmacist • Dietitian • Lymphoedema specialist services <p>Community Care Providers</p> <ul style="list-style-type: none"> • Silver Chain Nurses • Silver Chain Home Support Service • Other Home Care Providers • Aged Care Facilities • Aged Care Assessment Team • Community Aides and Equipment Program
On-going management	Review as appropriate	<ul style="list-style-type: none"> • Adjust treatment plan in accordance with clinical assessment review and investigative results
Separation	Discharge from Nurse Practitioner Service	<ul style="list-style-type: none"> • Issue resolved/client self-managing • Ongoing management by Silver Chain Nurses • Referral to Specialist Care

REFERENCES

Carville, K. (2017) Wound Care Manual. 7th ed. Silver Chain Foundation.

ACKNOWLEDGEMENTS

D Angel, Royal Perth Hospital, Western Australia

© Silver Chain Group Limited