Chronic wound assessment & management

Resident with chronic wound
(see Practice point 1)

1. Where resident presents with fever and / or delirium, isolate resident and place under standard and transmission-based precautions until GP review.
2. Check vital signs and assess pain using a cognition appropriate pain assessment tool, then review Recognition of the deteriorating resident and institute appropriate analgesia as indicated.
3. If not immediately life-threatening, review Checklist for contact and contact GP*.

STABLE VITALS → Identify and escalate Red flags (see Practice point 2)

UNSTABLE VITALS → Review advance care plan and refer to Management of residents with unstable vital signs

RED FLAGS PRESENT → Review advance care plan and refer to Management of residents with unstable vital signs

NO RED FLAGS PRESENT

1. With GP or with Wound care specialist undertake or arrange a multidimensional wound assessment (see Practice point 3).
2. Determine likely cause / type of wound.
3. Institute appropriate management as determined by cause of wound, exudate and tissue at base of wound - see QUT Wound Management resources.
4. Ensure adequate nutritional intake and hydration - where nutritional status suggests malnutrition, refer to dietitian.
5. Review tetanus immunisation status and administer booster where indicated as per Australian Immunisation Handbook.

Identify Escalation criteria (see Practice point 4)

ESCALATION CRITERIA ABSENT

1. Institute an interprofessional wound management process of assessment, goal setting, management and review (see Practice point 5).
2. Document the wound assessment and management using a structured wound documentation form (see Practice point 6).
3. Monitor for development of escalation criteria.

WOUND HEALS → Review and implement wound prevention strategies (see Practice point 7)

DEVELOPS ESCALATION CRITERIA

ESCALATION CRITERIA PRESENT

→ Refer to relevant wound specialist service (see Practice point 4) - where such a service is not available in a clinically appropriate time-frame, refer to HHS RaSS at GP discretion

*Where feasible, arrange telehealth or face-to-face GP review

Chronic wound assessment and management practice

1) Identifying a chronic wound

An acute wound is defined as a break in the integrity of the skin, in which healing progresses normally through an orderly and timely repair process, with resolution of the wound within no more than 4 weeks.

A chronic wound is defined as a wound that fails to progress normally through the phases of wound healing (haemostasis, inflammation, proliferation and remodelling) and fails to heal within 4 weeks. Development of a chronic wound may be due to systemic contributors (e.g. diabetes, malnutrition or connective tissue disease) or regional contributors (e.g. neuropathy, arterial or venous disease or lymphoedema).

2) Red flags in assessment and management of wounds 🚩

Red flags in assessment and management of wounds include:

- Unstable vital signs - refer to Recognition of the deteriorating resident
- Wounds with complex foreign body involvement or significant damage to surrounding structures (e.g.blood vessels, nerves, muscles, joints and tendons)
- Persistent bleeding unable to be controlled with direct pressure
- Acute or critical limb ischaemia - limb is pale, pulseless and painful or there is severe pain at rest with signs of critical ischaemia
- Underlying suspected fracture or other significant injury
- Severe pain out of proportion to wound progress, rapidly progressing cellulitis, or systemically unwell

Presence of red flags should prompt review of the resident's advance care plan and clinicians should refer to the Management of residents with unstable vital signs pathway.

3) Multidimensional wound assessment with GP or Wound Care Specialist

Multidimensional wound assessment includes assessment of the wound in the context of the person and their environment, with a focus on establishing the cause of the wound, involvement of significant structures and potential contributors to poor healing.

Assessment of the wound should include the following steps:

1. Focused history:

- **Where** is the wound?
- **When** was the wound first noticed to be present?
- **Wound onset** - was there initial inciting trauma or did the wound appear spontaneously?
- **Progression** - How has the wound progressed (e.g. is it smaller than at onset or is it progressively becoming larger).
- **Impact** - How is the wound affecting the resident - pain, mobility, odour?
- **Infection** - Are there symptoms of associated infection - fever, rigors, increasing surrounding erythema or redness, increasing discharge / exudate, acute worsening of pain?
- **What is the underlying aetiology or cause** - the wound may have a clear primary cause but commonly results from several factors e.g. primary traumatic wound that progresses to chronic wound in the setting of poor vascular supply, pressure and hyperglycaemia.
- **Prior treatments** already tried for this wound and specialists / clinicians involved.
- **Previous wounds**

2. History of existing factors that influence wound development and healing:

- Poor arterial blood supply: history of pain in calves / thighs or buttocks on walking; history of arterial bypass operations, pain at night in feet preventing sleep
- Poor oxygenation of blood: heart failure, respiratory disease, anaemia
- Venous disease: history of deep venous thrombosis (DVT), varicose veins or venous ulcers
- Peripheral neuropathy: history of lack of or altered sensation to feet
- Malnutrition or morbid obesity
- Disorders affecting immune system e.g. autoimmune disease or immunosuppressing disease (e.g.HIV or diabetes with poor glycemic control or metastatic cancer)
- Peripheral oedema in region of wound e.g. lymphoedema, congestive cardiac failure, renal disease
- Medications such as steroids or non-steroidal anti-inflammatory drugs or chemotherapy or other immune suppressants
- Skin factors e.g. dryness, prior radiation therapy to affected area, dermatitis

Chronic wound assessment and management practice points (cont'd)

3) Multidimensional wound assessment with GP or Wound Care Specialist (cont'd)

3. Examination: Perform vital signs where not already performed and if vital signs are unstable (red) as defined by Recognising the deteriorating resident, refer to Management of residents with unstable vital signs.

• **LOOK** for:

• **General appearance:**

Are there skin changes characteristic of underlying contributors to poor wound healing?

• **Venous insufficiency:**

- Haemosiderin staining (dark purple or rusty discoloration of the lower legs in gaiter distribution)
- Hyperkeratosis (thickening of the outer layer of skin leading to increased thickness of the epidermis and dermis)
- Atrophie Blanche (white patches on lower leg or foot resulting from destruction of capillaries in the dermis)
- Ankle flare (dilation of small veins just below the malleolus on the medial aspect of the foot)

• **Peripheral arterial disease:**

- Digital necrosis or gangrene
- Paper thin, hairless skin
- Pale foot

• **LISTEN to heart and lungs to assess for heart failure or respiratory disease.**

• **FEEL** or gently palpate on intact skin for:

- Pitting oedema on the limb of the wound and the contralateral limb
- **Signs of arterial disease - any of:**
- Cool or tender foot
- Prolonged capillary refill time
- Peripheral pulses absent or low volume
- **Signs of peripheral neuropathy:** Loss of sensation

• **ASSESS** the wound:

- Where is the wound located? Consider potential for osteomyelitis where an ulcer overlies a bony prominence

• **Wound size:** measure wound after cleaning and document length, breadth and depth including any undermining of wound edges (gently probe edges with sterile probe).

• T.I.M.E. assessment:

- **Tissue** at the wound base: devitalised (slough, necrotic tissue) or granulation tissue or structures (e.g. bone, tendon, muscle)
- **Infection or inflammation:** surrounding erythema (more than 2cm from wound margin), increasing pain or wound size, increasing or change in colour of exudate, systemic features of infection (e.g. fever)
- **Moisture imbalance:** amount and type of exudate (e.g. serous, haemoserous, purulent)
- **Edge of wound:** flat to wound, punched out, sloping, rolled or raised

• Surrounding skin condition e.g. macerated, wet, hairless or evidence of surrounding cellulitis.

• **Where the wound is on the lower leg, perform (or arrange an order for) an** ankle brachial pressure index -an ABPI < 0.9 or > 1.3 indicates the need for further testing.

Chronic wound assessment and management practice points

4) Escalation criteria

First screen for red flags as above - where red flags are identified, review the resident's advance care plan, consult resident (with nominated decision support person) or substitute health decision maker and refer to Management of residents with unstable vital signs pathway.

- **Refer to a vascular surgical OPD if:**
  - Non-healing ulcer associated with clinical signs or symptoms of peripheral arterial disease
  - Venous ulcer that is fails to heal despite implementation of evidence-based management
- **Refer to** Spinal Outreach Team (SPOT) **if:**
  - Resident has a spinal cord injury and associated pressure injury that does not respond to evidence-based pressure injury management and meets SPOT referral criteria.
- **Refer to an accredited wound specialist service, wound care clinic or wound NP if:**
  - Red flags in a resident who has conservative goals of care and is declining transfer to hospital
  - Resident with progressive deterioration of the wound despite implementation of evidence-based wound management
  - Foot ulcer in a diabetic resident (refer to high risk foot service where available)
  - Wounds outside of scope of RACF & GP to manage independently of the hospital sector

5) Interprofessional wound management plan

1. Assess (or reassess) wound.
2. Assess person for conditions or medications that may contribute to poor wound healing.
3. Define the likely cause of the wound.
4. Assemble the wound management team.
5. With the resident (or their nominated substitute health decision maker), determine and document the goals of wound management informed by validated wound assessment tools (e.g. PUSH), the resident's life trajectory and where indicated, a wound practitioner review.
6. Establish and implement a care plan that addresses the following domains:
   - Wound management plan including pain management, wound management and peri-wound skin care
   - Management of contributing conditions
   - Environmental management plan
   - Psychological support plan
   - Schedule for wound review and triggers for earlier review
7. Evaluate outcomes.

Chronic wound assessment and management practice points

6) Wound documentation

Documentation of wounds should occur with each wound review and include documentation of:

1. Aetiology of wound (e.g. pressure injury, arterial ulcer, venous insufficiency ulcer etc.).
2. Anatomical location of wound.
3. Wound dimensions (length, width and depth measured at longest / deepest part of wound or as measured by wound circumference tracing).
4. Wound bed appearance (e.g. exposed tissues, type of wound bed - granulation tissue, slough or necrotic tissue).
5. Wound edge characteristics (e.g. level, raised, rolled, undermined).
6. Amount and type of exudate / discharge, presence of malodour, colour and consistency of exudate.
7. Condition of peri-wound skin including any evidence of maceration, or cellulitis / infection.
8. Quality digital photographs of the wound which accurately reflect the condition of the wound (include a tape measure in the photo to ensure accurate representation of wound dimensions).

Wound treatment plans should include documentation of:

1. Current treatment including:
   i. Goal of treatment e.g. goal to heal or manage if assessed as unlikely to heal
   ii. Reasons for treatment changes
   iii. Associated pain management including pre-dressing change pain management strategies
   iv. Treatment of any factors adversely affecting wound healing identified in the multidimensional assessment
2. Timing of wound reviews (regular, planned review as well as triggers for more urgent review).
3. Criteria for escalation to the GP.

7) Wound prevention

Wound prevention involves implementation of evidence-based strategies to prevent and treat dry skin, improve skin barrier function, prevent incontinence-associated dermatitis and prevent skin tears and pressure injuries.

Implementation of the following is recommended:

1. A facility skin integrity champion to educate staff, ensure implementation and assessment of effectiveness of skin integrity programs of care.
2. A structured skin care regimen including:

- CLEANSING gently to remove irritants such as urine / feces from the skin; use of an emollient or soap substitute or dedicated continence care wipe. Skin should be kept clean and should be cleansed promptly after episodes of incontinence. The cleansing product should not contain alcohol, chemical colour or fragrance. Educate carers to dry skin using a light patting motion rather than rubbing
- PROTECTION of intact skin at risk of exposure to moisture using a leave-on product such as a dimethicone-containing product or an acrylate terpolymer film
- RESTORE moisture applying a pH neutral moisturiser twice a day

3. A structured program to prevent skin tears including, for example:

- Undertake regular risk assessment
- Where a resident has high risk, implement an individualised prevention program including encouraging the wearing of long sleeves and long trousers to protect skin
- Apply pH neutral moisturisers at least twice daily
- Avoid adhesives
- Ensure adequate lighting and protect furniture and mobility aids with protective padding

Chronic wound assessment and management practice points (cont'd)

7) Wound prevention (cont'd)

4. A structured approach to prevent pressure injuries - for comprehensive guidance refer to the 2019 international guideline for prevention and treatment of pressure injuries. https://internationalguideline.com/
   - Undertake regular risk assessment and skin inspections
   - Conduct nutritional screening - those at risk for malnutrition should have dietitian review to facilitate implementation of an individualised nutrition care plan
   - All at-risk residents should have an individualised pressure injury prevention plan implemented
   - Regular repositioning on an individualised schedule - frequency of reposition should consider the resident's level of activity, mobility, ability to independently reposition, frailty, pain and skin tolerance
   - Meticulous continence management and skin hygiene program
   - Prophylactic dressings (soft silicone multi-layered foam dressing)
   - Use of pressure relieving mattresses or overlays, heel protectors, low-friction slide sheets for resident transfers / repositioning
5. Implementation of foot and ankle exercises and regular hydration for residents.

Chronic wound assessment and management references

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Chronic wound assessment and management version control

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