Portable Negative Pressure improves wellbeing whilst promoting wound healing

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WOUNDS AND WELLBEING COMBINED
continuing the Anzac spirit

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Hotel Realm Canberra
Overview

- ACT Health environment - Community
- Well defined pathway of care
- Wound Management in the ACT
- Wellbeing
- Case study
- Optimising patient wellbeing
- Summary
ACT Health
Environment - Community

Canberra - 102 years old
Government
357,220 people
2 public hospitals
Canberra Hospital
Tertiary teaching, catchment for trauma from surrounding NSW
700 beds - 1000 beds
3000 nurses ACT Health
Community Care Program
5 community health centres
Wound Management in the ACT Community Care Program - well defined pathway of care

- Canberra Hospital & Health Services
- Community - NP and CNC Wound Management
- Tissue Viability Unit at Canberra Hospital
- 70 community nurses
- Link team – after hour community nursing service
- Walk in Centres – nurse led
- Podiatry - high risk multidisciplinary foot clinic
- Spinal/rehab/seating clinics
- Out patient wound clinics
- Share care with palliative care
- Private nursing care agencies
- Alexander Maconochie Centre
- Schools/child care centres
- General practice
- Residential Aged Care Facilities (RACF)
Referrals to the Community Wound Management Service

Wound types

- Pressure injuries 12%
- Skin tears 13%
- Dehiscence 4%
- Burns 1%
- Leg ulcers 70%

- Provide consultation, education and support to patients in their home environment and wound clinics
- Visit 30 RACF
Wellbeing is the principle focus of care⁹.

- Wellbeing is a dynamic matrix of factors, including physical, social, psychological and spiritual⁹.
- The concept of wellbeing is inherently individual, will vary over time, is influenced by culture and context, and is independent of wound type, duration or care setting⁹.
- Within wound healing, optimising an individual's wellbeing will be the result of collaboration and interactions between clinicians, patients, their families and carers, the healthcare system and industry⁹.
- The ultimate goals are to optimise wellbeing, improve or heal the wound, alleviate/manage symptoms and ensure all parties are fully engaged in this process⁹.
Factors affecting a patient’s wellbeing

- Delayed healing\(^1,2\)
- Pain \(^1,3\)
- Odour\(^1,3,4\)
- Exudate\(^1,3,4\)
- Frequent dressing changes\(^9\)
- Reduced mobility\(^9\)
- Poor Nutrition\(^9\)
- Loneliness and isolation\(^1\)
- Anxiety\(^1\)
- Depression\(^1\)
- Altered body image\(^1\)
- Low self esteem\(^1\)
- Sleep disruption\(^5\)
- House bound
- Fear of recurrence\(^6\)
- Economic cost\(^9\)
- Maintaining long term\(^6\) prevention measures
- Spiritual/cultural \(^7\)
- Confidence with clinician\(^9\)
- Important to assess the patient’s wellbeing – positive and negative responses
Case study

Mrs MC referred for assessment of left lower leg haematoma

- 92 years of age
- Female
- GP referred on 12 August 2013
- Sustained a traumatic skin tear from a knock by a wheelchair foot rest, which developed into a haematoma – 23 July 2013
- Lives in a high level Residential Aged Care Facility (RACF)
- Supportive family
- Ambulates with a frame around her room area
- Wheelchair for activities outside the facility
- Assistance with ADL’s
- No cognitive deficits
Co morbidities and Medications

- **Hypercholesterolaemia** - Atorvastatin 40 mg nocte
- **Hypertension** - Metoprolol Tab, 25 mg bd
- **Left DVT** - Warfarin 1.5 mg nocte
- **Non healing wound** Two cal Supp, 60 ml qid
- **Depression** Moclobemide 150 mg bd
- **Vitamin deficiency** Folic acid Tab, 5 mg mane
- **Angina** - Nicorandil, 20 mg bd
- **TIA**
- **Reflux** Omeprazole Tab, 20 mg nocte
- **Multiple falls - PH fractured left hip**
  - Calcium carbonate 1200 mg
  - Cholecalciferol Tab, 3000 unit(s)
  - Alendronate Tab, 70 mg weekly
Assessment

- Large haematoma developed **20 days ago**
- 8 x 7 cms
- Wound bed not visible
- Hard mass – 4cm depth - clotted dry blood
- Localised erythema
- Exudate – minimal
- DP – biphasic and PT – monophasic
- Lower leg oedema L>R
- No previous lower leg ulceration
- Has sustained skin tears
Assessment

- Recent blood tests – INR: 2.5 CRP, WCC, ESR within normal range
- Commenced on oral antibiotics at time of injury – completed
- Pain score: 2 - 4
- Anxious
- General observations stable
- Continued to ambulate and perform usual activities
- Oral nutritional supplements
- GP had attempted to drain haematoma 10 days after injury
- Current dressing regime – hydrogel – no progress
Optimising patients wellbeing

Due to the complexity of the wound, patient well being, age, co morbidities, anticoagulant therapy and she may require surgical debridement under anaesthetic.

What is the best management plan?

- **Timely assessment** – review by Vascular/Wound clinic 15 August 2013 – 3 days after initial consult
- **Debridement of haematoma – wound bed preparation** – wound debrided in the out patient setting — avoiding hospital admission and surgical debridement
- **Pain assessment pre and post debridement** – pain score 2 -3
- **Manage exudate and odour** - potential to bleed - alginate applied for its haemostatic properties
Optimising patients wellbeing

- **Prevent infection** - commenced on Cephalexin 500mgs BD for 10 days
- **Physical wellbeing - to promote wound healing** – to commence negative pressure wound therapy in 48 hours
- **Interaction with family and patient** - supported management plan
- **Economic cost** - notified RAGF to obtain approval for funding

**Decision to treat patient in home environment with monitoring**

by Nurse Practitioner
Single Use Negative Pressure Wound Therapy
Commencement of PICO – 17 August 2013
Why this dressing?

- New technology of applying Negative Pressure Wound Therapy (NPWT)\(^8\).
- The evidence demonstrated the use of PICO provides positive patient outcomes when applied to wounds \(^8\).
- The system is canister-free - portable\(^8\).
- Supported patient in maintaining her daily activities\(^8\).
- The pump generates an effective negative pressure of 80mmHg across the wound bed\(^8\).
- Provides therapy for up to 7 days\(^8\).
- Is easily applied and removed, minimising skin trauma\(^8\).
- Manages the fluid away from the wound through a combination of absorbency and evaporation\(^8\).
- Is a system that can be easily managed in RACF with support and education to clinicians and patient and her family
Debridement

Prior to debridement

PICO commenced and further debridement
1 week after debridement
Optimising patients wellbeing

Building therapeutic relationships
- supported patient and family
- education and support for clinicians at RACF
- shared approach - regular reviews by NP
- provided feedback on wound healing
- building trust

Social wellbeing - empowerment and choice
- patient involvement in care
- patient able to ambulate and engage in usual social activities
- nutritional support with increase in oral supplements
Optimising patients wellbeing

Mental wellbeing
- encouragement and support to prevent anxiety
- emotional and anxiety reduced when the patient became familiar with the dressing and could see the improvement in wound healing – she became confident and taught others

Physical wellbeing
- management of exudate and odour
- dressing changes less frequent
- pain score: 2
- some sleep disturbance due to being conscious of the device
- carers assisted patient with personal hygiene
PICO continued

20 days - Dressing changes x 2 per week

33 days – Dressing changes x 1 per week
47 days or 6 weeks and 5 days after PICO commenced

Photo taken 3/10/13 - 47 days - ceased PICO - Silicone foam applied

54 days – silicone foam applied
Cost

Dressings
- sizes 15 x 20 and 15 x15
- $1,400 over 6 weeks

Other costs
- nursing hrs
- oral supplements

PICO as a step down treatment
Did we optimise the patients wellbeing?

- Provided timely treatment and access to appropriate services and expertise
- Debrided haematoma in an out patient setting
- Collaborated/educated and interacted with clinicians, patient and family
- Monitored wound progress – managed exudate and odour
- Able to stay in home environment – no hospital stay
- Reduced patients anxiety
- Supported patient in her daily activities – routine and social
- Able to ambulate with device
- Provided evidence based wound care - wound healed and remains healed – 19/3/15
THANK YOU

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