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Oral Presentation Abstracts

A qualitative investigation of adherence to removable offloading devices among patients with diabetic foot ulcers

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Objectives To explore adherence to wearing removable cast walkers (RCWs) among patients with diabetic foot ulcers (DFUs).

Methods A qualitative study was conducted with the aim of exploring levels and determinants of adherence to wearing knee-high RCW offloading devices. Semi-structured interviews of ten participants, who had active DFUs and had their wounds offloaded by RCWs, were commenced at two diabetic foot clinics in Jordan. Adherence levels was explored through participants' self-estimation of time and activities (steps) of wearing the prescribed offloading device, then the determinants of this behavior were investigated including facilitators and barriers. Arabic was the original language of the interviews which was translated to English by backtranslation. Data were analysed through thematic content analysis which led to develop themes, categories, and sub-categories.

Results Two main key themes present the findings including: 1) The levels of adherence to wearing RCWs were varied, which were represented by three main categories: i)

times and durations for which RCWs were worn; ii) specific activities for which RCWs were not worn; and iii) specific steps for which RCWs were not worn. 2) Adherence to wearing RCWs was affected by multiple factors; which was represented by four main categories: i) factors related to personal knowledge or beliefs; ii) factors related to the severity of diabetic foot disease; iii) factors related to the social environment; iv) factors related to the usability of the RCWs.

Conclusions Level of adherence to wearing RCWs is varied and can be affected by many psychosocial and physiological factors.

Food first strategies incorporating a commercial wound supplement to support intake and overcome taste fatigue

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Objective Chronic wounds, those taking more than 4-6 weeks to heal, significantly contribute to the burden on healthcare costs and resources (1). Arginine plays a vital role in collagen syntheses, decreasing muscle loss and strengthening wounds but has an unpleasant aftertaste which, if unmasked inhibits prolonged use of supplements creating poor adherence (3). This study aimed to understand the efficacious dose rate of Arginine and use novel food first strategies with a commercial wound supplement to fortify recipes to create food first strategies.

Method A systematic literature review profiled efficacy of commercial wound supplements. A review of aged care menus identified suitable food first strategies to develop recipes. Twenty recipes were fortified with the commercial wound supplement and Difference Testing (Triangle Testing Protocol) used to determine acceptability/palatability from unfortified controls.

Results The commercial wound supplement's nutrition profile was mapped against the systematic review indicating that 4.5g per day of Arginine is adequate to support wound healing. Twenty recipes containing half the efficacious dose (two serves required per day) were developed from common menu items such as bread, custard, ice cream, porridge and biscuits. In all recipes the protein profile increased by 15% with no taste impact.

Conclusion A wound supplement with a dose rate of 4.5g of Arginine was successfully incorporated into foods without significant taste impact. This food first strategy delivers wound support as part of meals. Incorporating the supplement with food also increased the nutrition profile, leading to nutrient dense meals, quality health care and reduce taste fatigue.

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Surgical site infection prevention: a quality improvement project in vascular surgery.

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Objectives Surgical site infections (SSI) are a major contributor to post-operative complications and morbidity. This is often avoidable and preventable the outcome can have a negative impact on the patients involved and in some cases have long-term implications. Patients who develop groin infections have a higher risk of readmission to hospital, repeated surgical procedures, extended use of antibiotics, increases costs occurring and extended hospital stay (Audu, 2018).

Methods We conducted a retrospective review of in hospital patient that had vascular groin incisions from 1st September 2018- 1st September 2019 there were 49 procedures performed with 11 readmissions or secondary diagnosis of SSI rate of 22.5%. Due to the complexities involved in the position of the wound (groin) it was deemed high risk for infection. Initially the project was a randomised controlled trial to determine efficacy for the use of NPWT in all vascular surgical cases where the groin was accessed. During the literature review process it was shown that the evidence is there to already make the change. A Meta-analysis of the current randomised controlled studies that have compared NPWT with standard treatment conducted by Antoniou et al, (2019) reviewed 6 RCTs. They reviewed 733 groin wounds and found those who had NPWT were at a lower risk of developing SSI than those of the control groups, lowered risk of revision surgery and shorter hospital stay. As a result we decided based on the literature to make a practice change and review the results after 6 months.

Results Change of practice was decided and the results of 6 months using PICO NPWT in post-operative vascular high risk groin incisions has improved the SSI rates. We would recommend that this is rolled out across all vascular centres.

Conclusions Current documented rates of infection for vascular surgery is 4-44% using formal SSI programmes to examine practice is important to help initiate practice changes. This paper demonstrates the improved outcomes for this high risk group.

Management of venous leg ulcers using two-layered compression bandage and a polyacrylate fiber dressing

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Situation Venous disease is among the most common causes of lower extremity ulceration. With increasing incidence of diabetes mellitus and aging population in Asia, the occurrence of venous leg ulceration will likely to be more prevalent. Exudate and slough management are pivotal to wound healing. Slough is frequent in venous leg ulcers and the effort to remove them by sharp debridement may prove to be challenging and painful to the patients. Presently, the gold standard for the treatment of venous leg ulcer is multi-layered compression bandage. Polyacrylate fiber dressing have been suggested to promote the healing of wounds burdened by layers of adherent slough tissue.

Action(s) taken/treatment(s) provided 2 subjects with non-healing venous lower extremity ulcers received treatment with polyacrylate fiber (Urgoclean®) and 2-layered compression bandage (UrgoK2). Wound inspection and sharp debridement was done by podiatrist prior to reapplication of compression bandage on each weekly study visit.

Outcome(s) Total wound closure was achieved in both patients within 3-months of treatment and remain healed after 6-months of post-study follow-up visit. The dressing materials were well-received by the patients and there was noticeable pain reduction of pain score. No adverse events were reported.

Lesson(s) learned A holistic, patient-centered approach is essential in effective wound care management. Wound dressing may play a crucial role but it should not replace the need for adequate wound debridement and patient's compliance.

Validation of predictive factors for infection in adults with chronic leg ulcers

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Objectives To validate the ability of physical, psychological and local lower-limb factors, to predict infection in adults with chronic leg ulcers over a 12-week period.

Methods The study was a prospective longitudinal study in a single centre in which patients were followed up for 12 weeks. It was hypothesised that there would be no difference in time-to-infection between people with previously identified risk factors and those without risk factors. Ethical approval was obtained from appropriate Ethics Committees. Patients were recruited from an outpatient clinic of a metropolitan hospital in Australia between August 2017 and May 2018. The study included cognitively competent adults who had at least one chronic leg ulcer with a duration of ≥ 4 weeks. Data were collected from recruitment (baseline), and each visit (weekly or fortnightly) up until 12 weeks. A Cox proportional hazards regression model was used to identify predictive factors for infection.

Results The sample consisted of 65 adults with chronic leg ulcers and 9.2% of these had their ulcer infected at baseline. Two predictive factors, using walking aids and gout, were found to be significant factors increasing the likelihood of developing infection within 12 weeks in the sample without infection at baseline.

Conclusions The present study showed that patients, who either used walking aids and/or were diagnosed with gout were at greater risk for infection compared to those without these factors. These findings provide new information for clinicians in the early identification of patients at risk of infection, and for patients in enhancing their awareness of their own risk.

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Photobiomodulating effects of blue Light 405nm to 470nm on pathogenic microbes and biofilms

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Objectives To elucidate the effects of light wavelengths within the 405nm and 470nm range of visible blue light on pathogenic microbes and biofilms.

Methods Strains of the micro organisms tested were 2 aerobes *Pseudomonas aeruginosa*, *Staphylococcus aureus* and 1 anaerobe ; *Propionibacterium acnes* treated with wavelengths of 405nm and 470nm of blue light with a dose of 5 J, 10 J and 15 Joules cm² and colony counts were taken and compared to untreated controls. *Pseudomonas aeruginosa* grown in planktonic state on solid state surfaces and as biofilms was treated with 445nm at varying energy dosages of 40 J 60 J and 120 Jcm² and bacterial growth was monitored over 24 hours

Results 405nm produced 95.1% bactericidal effect and 90% kill rate on *Pseudomonas aeruginosa*, and *Staphylococcus aureus* ($p < 0.05$), while 470nm achieved 96.5% kill rate on *Pseudomonas aeruginosa* at all dose levels, but only killed *Staphylococcus aureus* by 62% using a dose of 10 and 15 J cm² There were no bactericidal effects observed using 405nm or 470nm on *Propionibacterium acnes* 445nm affected *Pseudomonas aeruginosa* growth within biofilm up to 18hrs with a dose of 40Jcm² and 60Jcm² and significant inhibition of bacterial growth was demonstrated after a dose of 120Jcm² for 24 hours and no difference in the density of bacteria was detected over that time.

Conclusions The principle cause of drug resistance in *aeruginosa* is low permeability of its cell membrane, electron microscopy shows that blue light induces cell wall damage which could facilitate absorption of antibiotics and instigate disruption to the biofilm protective matrix thereby making it more susceptible to antibiotics and reducing drug resistance

The burden of lower extremity ulcers in the community

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Background and Objectives Leg ulcers affect up to 3% of people over 60 and 5% over 80 years and modelled costs equate to \$500m annually in Australia¹. The study aims to determine the prevalence and costs to heal lower extremity ulcers in the community.

Methods Nurses delivering wound care in a Western Australian community nursing organisation enter wound assessment, care plan and treatment data onto tablets or smart phones at point of care. Prospective data from all patients with lower extremity ulcers in 2019 are entered and analysed for aetiology, wound healing outcomes, time and costs to discharge. This data will be benchmarked against 12-month's prospective data collected and analysed in 2018 to determine the healing outcomes, treatment efficacy and costs to discharge.

Results The 2018 study found 33,115 wounds of all types attributed to 15,480 patients and lower extremity ulcers comprised 24% overall. There were 4,842 leg ulcers (vascular, lymphoedema, atypical) and venous ulcers comprised 50% ($n=2,397$). There were 9% ($n=3,030$) foot ulcers (ischaemic, neuropathic, atypical) and neuropathic ulcers comprised 42% ($n=1,276$). Males comprised 52% while females were significantly older (77.9 versus 72.1; $t(5965)=16.0158$; $p<0.001$). Leg ulcers had a mean 87 days and foot ulcers 78 days length of stay. The mean cost (consumables used and time to care) to heal a leg ulcer was \$372 and a foot ulcer \$336. This data will be used to benchmark the 2019 data.

Conclusion Benchmarking of lower extremity ulcer healing outcomes and costs to treat informs treatment protocols and resourcing and is anticipated to inform national health agendas.

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Australian perspective of diabetic foot ulcer burden: insights from key opinion leaders and the literature

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Objective Diabetic foot ulceration (DFU) is a common consequence of diabetes associated with substantial burden on patients, health care systems, and society. However, contemporary data from Australia on the financial burden of patients living with DFU and the practice standards followed by health care professionals to manage DFU are lacking. Therefore, the aim of this study was to investigate the personal and economic burden of DFU in Australia, including the gaps in management pathways.

Methods A scoping literature review was undertaken between 2009 and 2019 to identify treatment practices, clinical characteristics, referral pathways, reimbursement, resource use and treatment costs. Semi-structured one-hour telephone interviews were conducted with Australian key opinion leaders (KOL) in DFU management to verify the literature findings.

Results Treatment algorithm, cost and procurement and referral pathways were three common knowledge gaps identified in the review. These topics informed the interviews with the KOL, which concluded that although referral pathways are followed in Australia, there are variations in the classification and guidelines for prevention and management of DFU within and between states and territories.

Conclusion Although there is awareness of the personal and economic burden of DFU, there are discrepancies in the standards of care in the prevention, classification, and management of patients with DFU between health care professions.

Kennedy terminal ulcers: a review of current evidence

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Objectives This scoping review aimed to identify and map the current published evidence on Kennedy terminal ulcers in terms of its definition, prevalence, assessment, treatment, management, healthcare costs and quality of life issues for patients in all healthcare settings.

Methods Using Arksey and O'Malley's (2005) scoping review five-step framework, we systematically searched the following databases Cochrane Library, CINAHL, EMBASE, MEDLINE and ProQuest databases, and five guideline repositories. Date limiters were 1983-2018. Search terms were: Kennedy ulcers, Kennedy terminal ulcers, terminal ulcer, skin failure and skin changes at life's end. Data were extracted and narratively synthesised.

Results We identified 2997 sources, with 32 included in this review. There is limited evidence on Kennedy terminal ulcers with most published by nurses in the United States of America. Globally, Kennedy terminal ulcer prevalence data is limited, with no Australian data available. No validated tool exists to accurately assess for this type of ulcer.

Conclusions Significant knowledge and clinical practice gaps exist in the assessment, management and treatment of Kennedy terminal ulcers. Considered unavoidable, these ulcers only occur in some dying individuals. Misclassification of these ulcers as pressure injuries may result in unwarranted financial penalties for organisations. Research is needed inform clinical practice, improve the care of these dying patients and provide clinicians with the knowledge to educate patients about their end-of-life care decisions.

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Prevalence and predictors of pressure injuries among older hospitalised adult patients: an Australian multi-site study

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Objectives Describe the prevalence and predictors of pressure injuries among at-risk older adult patients within the first 36 hours of hospital admission.

Methods This prospective correlational study conducted across eight Australian hospitals gathered observational data on participants' age, gender, pressure injury, Body Mass Index score, comorbidities and residence (community/aged care facility). Using Stata (version 14), a cluster adjusted univariate and multivariate logistic regression analysis was undertaken, with hospitals as the cluster.

Results Our sample of 1,047 participants aged ≥ 65 years with limited mobility was drawn from a larger Australian pragmatic cluster randomised trial. The pressure injury prevalence rate was 10.8% ($n = 113/1047$; 95% CI: 9.0; 12.8), with the variables age, comorbidities and living in an aged care facility predicting the presence of pressure injury within 36 hours of hospital admission. For every one-year increase in participant's age there was a 5% (OR= 1.05; 95% CI 1.02; 1.08) increase likelihood of them having or developing a pressure injury on or within 36-hours of hospital admission. Participants admitted from an aged care facility were 75% (OR= 1.75; 95% CI 1.08; 1.37) more likely to have a pressure injury on or within 36-hours of hospital admission.

Conclusions Our findings confirm that many older adults with limited mobility, multiple comorbidities and individuals living in aged care facilities are more likely to come to hospital with a pressure injury or develop one soon after admission. Detecting pressure injuries among this vulnerable population enables clinicians to implement appropriate prevention, treatment and management strategies.

Healing community wounds: times and costs to discharge

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Objectives The study aimed to determine community wound patient demographics, prevalence and types of wounds managed, their outcomes, length of stay and time and costs to discharge.

Methods A descriptive study was conducted. Prospective assessment and care plan data from all patients with wounds managed by a large Australian community nursing organisation, were entered onto tablets or smart phones at point of care. Ongoing audits ensured completeness and accuracy of data. Study endpoints were wound: types, numbers, outcomes, length of stay, consumables used, time taken to perform dressings and time and costs to discharge. Data collected in 2019 was analysed and benchmarked for times and costs to healing.

Results In 2019, there were 37,517 wounds attributed to 17,054 patients and 79% ($n=33,582$) of wounds were discharged healed or self-care. Wounds comprised: 39% acute, 15% leg ulcers, 10% foot ulcers, 14% skin tears, 8% pressure injuries, 2% tumours and 12% other wounds (primarily dermatological wounds). Males comprised 53% and females 47%. The mean age was 65 years. The mean length of stay was 52 days all wounds, but foot and leg ulcers were 94 days and tumours 109 days. The mean cost to discharge wounds was \$547 for consumables used and nurse time to treat. However, significant maximum variances across all wound types were evident.

Conclusion Community wounds and their costs to care were determined. Point of care data entry ensures accuracy of actual, rather than modelled data, which benefits organisational, national and international benchmarking of quality care outcomes and cost-effectiveness.

Anti-inflammatory properties of high-density lipoproteins in diabetic wound healing

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Objectives This study aimed to determine if topical reconstituted high-density lipoproteins (rHDL) have anti-inflammatory effects in diabetic wound healing; explaining their wound healing benefits. We also sought to track the fate of topical rHDL.

Methods Diabetes was induced using streptozotocin in C57Bl6/J mice. Two full thickness sub-flank wounds were created, splinted open and rHDL or PBS applied topically daily (n=8-10/group). Inflammatory genes were assessed in wounds collected at baseline, 24h and 3 days post-wounding by qPCR. Wound macrophages were assessed using flow cytometry 7 days post-wounding and area changes measured. Fluorescent rHDL was generated (DiO-rHDL) and its fate was tracked at 15 min, 1, 6, 24h after application by flow cytometry in wounds.

Results In diabetic mice, topical rHDL increased the rate of wound closure (23.3%, $P < 0.05$), compared to PBS. rHDL caused early increases in inflammatory genes CCL2 (89%), IL-6 (85%), TGF- β (30%) and NF- κ B (31%) after 24h, $P < 0.05$. After 3 days rHDL reversed this and caused a striking drop in CCL2 (155%), IL-6 (92%), TGF β -1 (48%) and NF- κ B (62%), $P < 0.05$ for all. Diabetic wounds had more macrophages than non-diabetic wounds (3.4-fold), $P < 0.05$. Interestingly, diabetic rHDL-treated wounds had less M1 (27%) and M2 (42%) macrophages, compared to diabetic PBS wounds. DiO-rHDL was internalised by wound macrophages within 15 mins. Fibroblasts and endothelial cells internalised DiO-rHDL by 1h.

Conclusion Topical rHDL exerts an early inflammatory effect followed by potent anti-inflammatory effects in diabetic wounds. This may explain their wound healing benefits. rHDL is internalised by wound cells and retained.

The impact of venous leg ulcers on wellbeing and quality of life

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Objective Venous leg ulcers (VLU) comprise the largest number of wounds managed by a community nursing service in Western Australia. However, their impact on quality of life and wellbeing was unknown. The objective was to investigate the quality of life (QoL) and wellbeing of patients with VLUs and associations with wound treatments.

Methods An electronic survey was conducted amongst community patients with VLUs at point of care. Health history, Wound QoL Tool¹, the FiND Tool² and three questions designed to determine wellbeing informed the survey design. Data was uploaded on SharePoint for analysis.

Results A 93% (n=244) response rate was obtained from 266 patients. An even number of males and females participated and the mean age was 73 years. Comorbid conditions were present for 66.4% (n=162) and 85% (n=201) were found to be overweight or obese. Thirty percent had their VLU for longer than 1 year and 55% were classified as 'disabled', 24% 'frail' and 22% 'robust'. There were 83% who stated that the VLU had 'some impact' with 31% stating it had a 'large impact'. Frustration over time taken to heal had the most QoL impact and that impact increased according to level of disability. There were 37% who said treatment made it difficult to shower and 36% who found difficulties in wearing preferred clothes and shoes.

Conclusion The VLU had 'some' to 'large' impact on reducing QoL especially amongst those that were obese or disabled. The study will inform patient centred care for patients with a VLU.

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Use of a wireless sub-bandage pressure monitor to improve application of compression bandages.

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Objectives Compression bandaging has been shown to facilitate the healing of venous ulcers and a pressure of 50-60mmHg at the ankle has been determined to be the most effective pressure in those with a normal arterial supply. At present the application of bandages is unregulated and there is no means of assessing the pressure applied except with expensive sub-bandage pressure devices that are attached to an external monitor. The aim of this study was to show that a wireless device applied at the ankle and transmits applied pressure to a mobile phone, would improve the accuracy of compression bandaging.

Methods A pressure monitor (compressive BT) was applied to the medial gaiter region of a volunteer. 54 nurses were asked to apply a 3 layer compression bandage to the limb over the monitor. Initially they did this with no recourse to feedback (blinded). They were then asked to apply the bandage again with access to feedback from the device via a display on a mobile phone.

Results The range of pressures obtained in the first, blinded, application of bandages was 12mmHg to 76mmHg. 27% achieved the ideal pressure range of 50-60mmHg. On the second application of the bandages with feedback from the pressure monitor, 59% achieved a pressure of 50-60mmHg. proNursing staff reported that they are often afraid to apply bandages too tightly and that the pressure monitor gave them more confidence to do so.

Conclusions Compression therapy is essential for the healing of a majority of lower leg wounds but at present the compression applied is largely unknown. This wireless device that remains beneath the bandage allows the correct level of compression to be achieved and would allow pressure to be monitored over time. It would also allow application of lower levels of pressure to be safely applied to those with arterial compromise.

What matters in complex wounds: the experience of patients accessing wound services

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Objectives Complex wounds in the older person are characterised by long healing periods, and for many patients, there may be limb-threatening pathology challenging both hospital and community services.

Methods Seventeen patients with complex wounds from three different wound service models were engaged in semi-structured interviews. Content analysis, underpinned by Levine's 'Energy Conservation' model, guided and refined analysis.

Results Levine's principles of energy, and structural, personal and social integrity were central to the complex wound trajectory and explained both health breakdown and adaption. Energy was drained by pain and loss of mobility and sleep, exacerbated by aging and emerging frailty. Loss of contribution to the family and community and spontaneity and freedom inhibited personal and social integrity. Specialist wound clinics provided control and consistency, with access to the right clinician and care at the right time. Certainty in dressing scheduling and application enhanced social integrity, which was less certain with home visits by community nurses. Regardless of the model, patients valued services that included them in negotiated partnerships and coordinated their care between clinicians. Wound clinics enhanced opportunities for clinical supervision and wound skill development.

Conclusions Specialist wound clinics provided services that integrated the care of frail people with complex wounds while enhancing their personal and social integrity. These services need to better intersect with community nursing and residential aged care services in shared care models. Reducing variation in scheduling and clinical care are important to patients as they navigate the experience of a complex wound.

Barriers and Enablers of implementing the T.I.M.E. framework when Assessing and Managing Chronic Wounds.

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Objectives

To identify gaps in practice, through data collection over a period of 4 years at various District Nursing Services. To explore the perceived barriers and enablers to implementing the T.I.M.E framework when assessing and managing chronic wounds from key stakeholders.

Methods Ethics was granted. Part 1 of the research consisted of analysing retrospective data collected between 2014- 2018, pertaining to 1758 audited wound care charts against the TIME components and adaption into practice. Part 2 of research involved interviewing key stakeholders to explore their experience of implementing the (T.I.M.E.) framework into everyday practice when assessing and managing chronic wounds.

Results The data was an instigator to changes in wound care practice. The synonymous findings perceived as barriers and enablers were; service size and respective members, the link /the wound champion and the power of the collective group, the ability services to implement strategies and adapt to changes and processes within the system and the development of a true understanding of the T.I.M.E framework. The smaller services implemented the TIME framework faster than larger services.

Conclusions TIME is a valid and easily implemented framework that provides guidance and a step by step process to assessing and managing wounds. Data collection provides an understanding of what happened over time, and the ability to observe service improvements in real time. Barriers and enablers of implementing the TIME framework were evident and varied between services. Collaboration and collectively taking small steps created change and standardised practice to improve wound care practice.

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A pilot skin and wound care programme in two residential aged care facilities

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Objectives To implement and evaluate a skin care and wound prevention and management programme based on staff identified learning needs.

Methods Ethical approval was gained for a six-month pilot research study in two New Zealand hospital-level residential aged care facilities using a mixed method and a continuous quality improvement methodology. Nurse and healthcare assistant focus groups and pre-knowledge questionnaires determined educational and resource requirements. Education included preventing pressure injuries, skin tear prevention and management, and wound assessment and management. Additional resources, including innovative 'Hot Tips' to resolve staff conflict will be overviewed. To evaluate programme effectiveness post focus groups, knowledge questionnaires, education evaluations and facility-reported skin tear and pressure injury numbers were analysed. Nurse and healthcare assistants Champions were recruited to aid programme implementation.

Results Knowledge questionnaires improved post programme, and evaluations from focus groups and education sessions were overwhelmingly positive. Retrospective and post programme pressure injury numbers in both facilities was low. During knowledge testing pressure injury numbers increased in one facility, which may be attributed to an increase in reporting. In both facilities skin tear numbers declined and was maintained three-months post programme. This was attributed to the implementation of a skin care regime. The Champion role, developed throughout the programme, aided staff leadership and programme ownership.

Conclusions On-site leadership and mentoring, that promotes evidence-based education, can improve practice, resident care and outcomes by reducing skin tear rates. The programme determined practice issues were similar in both facilities and therefore may be transferable to other facilities.

References

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People with Dementia in Long Term Care: The Prevalence and Management of Wounds

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Objective To determine the prevalence of wound types and current management strategies of wound care for people with dementia in long-term care.

Methods A scoping literature review, a cross-sectional observational and chart audit study of residents in dementia specific facilities in long-term care.

Results The scoping review indicated that people with dementia/cognitive impairment are often excluded from wound related studies and of the nine studies included in the review, none looked at the prevalence of types of wounds other than pressure injuries. In the skin audits (n=34), 53% of residents were male with a mean age of 79.59 (SD 8.75) years and 78% (n=28) were found to have at least one wound. The total number of wounds identified in the skin integrity audits ranged from 0-8 (median 3) per resident with skin tears noted as the most common wound in these mostly independently mobile people with dementia, however, documentation of current wounds occurred in less than a third of residents.

Conclusions This is the first and only study found that notes the prevalence of different wound types in people with dementia and current management strategies used across two dementia specific facilities. This lack of resources limits evidence in guiding practice and while many guidelines exist on the management of wounds, none of these guidelines address the issues associated with dementia/cognitive important. Hence, information gained from this research will provide much needed information to inform evidence-based clinical care for people with dementia in long-term care.

Infrared dermal thermometry is highly reliable in the assessment of patients with Charcot neuroarthropathy

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Background Charcot neuroarthropathy (Charcot foot) is a serious limb-threatening complication most commonly seen in individuals with diabetic peripheral neuropathy. Although dermal thermometry is widely used by clinicians to assist in the diagnosis, monitoring, and management of the disease, there is limited high-quality evidence to support its reliability. Therefore, this study investigated the intra-rater and inter-rater reliability of infrared dermal thermometry in patients with Charcot neuroarthropathy.

Methods We collected clinical, demographic, health status, and foot examination information on 32 adults with Charcot neuroarthropathy from a metropolitan high-risk foot service in Melbourne, Australia. Infrared dermal thermometry assessments were conducted by two independent raters at 10 anatomical sites of the Charcot foot using both a (i) touch and (ii) non-touch technique. Intra-rater and inter-rater reliability of the two assessment techniques were evaluated using intra-class correlation coefficients (ICCs), limits of agreement, standard error of measurement, and minimal detectable change statistics.

Results Mean age was 59.9 (standard deviation [SD], 10.5) years, 68.8% were male, average duration of diabetes was 20.6 (SD, 15.1) years, 71.9% had type 2 diabetes, 93.8% had peripheral neuropathy, 43.8% had peripheral arterial disease, and 50% had previous foot ulceration. Charcot foot most commonly affected the tarsometatarsal joints (38.9%), had a median duration of 2.8 (interquartile range [IQR], 1.3 to 5.9) months, and a large proportion were being treated with total contact casting (69.4%). Overall, there was good to excellent intra-rater and inter-rater relative reliability for the 'touch' technique (ICC, 0.87 to 0.99; ICC, 0.83 to 0.98, respectively), and excellent intra-rater and inter-rater relative reliability for the 'non-touch' technique (ICC, 0.93 to 0.99; ICC, 0.91 to 0.99, respectively). In addition, measurement error was found to be relatively low across the 10 anatomical sites.

Conclusions Infrared dermal thermometry can now be used with confidence in clinical and research settings to provide a reliable assessment of skin temperature in patients with Charcot neuroarthropathy, using either a touch or non-touch technique at 10 commonly used testing sites. A non-touch technique, however, was observed to have slightly higher reliability indicating it may be associated with less measurement error than the touch technique.

Implementing “Caesarean Infection Prevention” bundle at a rural hospital: Insights beyond measures and numbers

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Objectives Tamworth Rural Referral Hospital saw a dramatic reduction in caesarean site infections (5.1% to 1.6%) after the introduction of “Caesarean Infection Prevention” bundle in 2017(1,2). This 5-element bundle of pre-determined steps namely ante-natal risk assessment, pre-operative hygiene, skin preparation, timely antibiotic prophylaxis and appropriate postoperative dressings was performed conscientiously for all patients over 1 year. This motivated us to explore the experiences of health care professionals (HCPs) involved in the execution of the bundle. We targeted the perceived barriers and facilitators in clinical implementation of this bundle.

Methods Using qualitative techniques, we conducted 19 semi-structured interviews with HCPs involved with the application of this bundle. Interviews were audio-recorded and transcribed. Research team members reached consensus on coding, content analysis and key results (theme saturation achieved).

Results Facilitators and barriers were grouped into three overarching themes: (a) personnel related (2) task-related (3) organisation related. All participants emphasized that “leaders” championing the bundle inspired all employees, dealt with resistant staff and were the prime facilitators in implementation. Conversely, lack of awareness of the protocol steps such as correct application of negative pressure dressings was the most frequently reported barrier and regular education was cited as the solution to overcome it.

Conclusions The implementation of “Caesarean Infection Prevention” bundle substantially influenced professional practice and accomplished unique, department-specific behavioural changes. Additionally, the study provides a framework for implementation, suggestions for transitioning, and improvements to avoid barriers in the setting of a rural hospital that choose to achieve similar results.

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Maintenance of head positioning in immobile critically ill patients at high-risk of pressure injuries.

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Objectives The objectives of the study were to (a) evaluate the recruitment and monitoring process in the intensive care unit setting and (b) measure the maintenance of head positioning when using a purposed positioning device and usual care devices.

Methods A prospective feasibility study was conducted in Australia. The sample was immobile critically ill adults at high-risk of pressure injuries formation. The intervention device was the purposed positioning device, and the usual care devices were pillows and towels. The head positioning was measured with a Smart Phone clinometer application at baseline, one hour and two hours on six consecutive occasions.

Results The majority of patients screened during the 28 day recruitment period (n=106, 92.2%) were not immobile and therefore were ineligible to participate. The sample (n=8) was predominately male (n=5, 62%) and 59 years of age on average. The degree of difference in the head positioning angle from baseline to two hours was 7 degrees for the pillow and rolled towel (78 degrees to 71 degrees), 5 degrees for the pillow alone (79 degrees to 74 degrees) and 2 degrees for the purposed positioning device (84 degrees to 86 degrees).

Conclusions The use of the purposed positioning device for head positioning was feasible in this study. The benefit of using devices for maintenance of head positioning should be confirmed in larger and more controlled studies. Patient eligibility characteristics, particularly immobility should be considered in future pressure injury prevention research, if evaluation of positioning equipment is sought.

Nurses’ knowledge and attitudes towards pressure injuries: a cross sectional survey

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Objectives We aimed to explore nurses’ knowledge and attitudes towards pressure injury prevention and management, to identify aspects to target to support development of an educational tool for prevention and management of pressure injuries.

Methods A cross sectional survey was distributed in an electronic and paper version to all nurses employed in a tertiary hospital in Sydney between November 2019 and February 2020. This contained the Piper-Zulkowski Pressure Ulcer Knowledge Test version 2(1) and Moore and Price’s pressure injury survey (2), valid and reliable instruments for exploring nurses’ knowledge and attitudes towards pressure injuries, respectively. Data analysis was carried out using SPSS version 26.

Results Around 900 participants received the survey with 263 completed surveys returned (response rate 29.2%). Correct responses for the Knowledge Test subscales were prevention/risk, 71%; injury staging, 40%; wound description, 37.5%. Moore and Price’s pressure injury attitude survey responses were; most nurses agreed that all patients are at risk of developing a pressure injury, 90%; pressure injuries can be avoided, 86.7%; nurses have concerns with their pressure injury practice, 85.6%; view pressure injury prevention as more important than pressure injury treatment, 78.7%; consider regular, 93.9%, and continuous assessment, 94.4%, as important methods of monitoring patients’ risk status.

Conclusions Preliminary analysis indicated that pressure injury prevention strategies should be emphasized. Patterns of knowledge and attitude strength and deficits will be compared to published results, and findings will support development of an education tool.

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Low-frequency contact ultrasonic debridement and polyhexamethylene biguanide on chronic wounds: a randomised control trial

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Objectives The primary aim of this research was to investigate the effect of a combination treatment of polyhexamethylene biguanide and low-frequency contact ultrasonic debridement on the bacterial load in chronic wounds in adults, compared to ultrasonic debridement alone. Secondary outcomes included: wound progress, quality of life, and pain scores.

Methods In a single-blinded randomised controlled trial, participants (n=50) were recruited to receive ultrasonic debridement weekly for six weeks. The Intervention group (n=25) received a 15-minute topical application of polyhexamethylene biguanide post ultrasound, at each dressing change and in a sustained dressing product. The Control group received non-medicated products and cleansed the wounds with clean water or saline. Wound swabs were taken for microbiological analysis (week 1, 3, 6 & 12) before and after treatment.

Results Major findings included a significant difference in bacteria recovered at week 12 (p<0.001), with fewer in the Intervention group. There was no significant difference in complete wound healing between the groups (p=0.47) or wound related quality of life (p=0.15), however a significantly larger number of wounds deteriorated in the Control group (44%) when compared to the Intervention group (8%, p=0.01). The proportion of wounds that reduced in size was greater in the Intervention group (61% vs 12%, p=0.019). Pain scores were statistically significantly different between the groups at week six, with lower scores in the Intervention group (p=0.04).

Conclusions The combination therapy of low-frequency contact ultrasonic debridement and polyhexamethylene is more effective than low-frequency contact ultrasonic debridement alone, on chronic wounds in adults.

Meta-review of cochrane review recommendations for pressure injury prevention and treatment

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Objectives There are many high-quality systematic reviews to guide practice around pressure injury prevention and treatment, but the extent to which they provide practical recommendations for practice and research is not understood. Therefore, the aim of this meta-review was to synthesise and evaluate current systematic review evidence on the prevention and treatment of pressure injury.

Methods Only Cochrane Reviews were included in this meta-review because of their stringent quality control. Evidence from reviews was independently screened and assessed for risk of bias and certainty by two authors, with a third resolving discrepancies. Methodological quality of included reviews was assessed using the second version of A Measurement Tool to Assess Systematic Reviews, and a narrative synthesis undertaken.

Results Twenty-five Cochrane Reviews were included; eight pressure injury prevention and 19 treatment. Prevention reviews included 102 studies (27,933 participants). Treatment reviews included 154 studies (over 16,936 participants). Three prevention reviews and nine treatment reviews reported risk of bias, judging included trials as having low or very low-quality evidence. Two reviews reported moderate quality evidence. Methodological quality of the systematic reviews was rated as high for eight reviews (7/19 for treatment and 1/6 for prevention). Recommendations for prevention included repositioning, nutrition and support surfaces. Recommendations for treatment focused on nutrition and repositioning. Recommendations for research consistently focused on larger, high-quality trials.

Conclusions This meta-review confirms an overall lack of high-quality evidence, resulting in few practical recommendations to guide clinicians. Generation of high-quality evidence on pressure injury prevention and treatment is therefore imperative.

A comparative study of surgical wound care practices across two acute care settings

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Objectives The aim of this study was to describe and compare surgical wound care practices across two Australian hospitals to identify and explore variations in practice compared to evidence-based guidelines.

Methods A prospective comparative design using structured observations of surgical patients receiving wound care by a convenience sample of nurses. A specifically developed audit tool was used to collect data on observed wound care practices, documentation of wound assessment and practice. Patients' clinical characteristics were collected from electronic health records.

Results Across the two hospitals, 154 nurses undertaking acute wound care and 257 surgical patients receiving wound care were observed. Across hospitals, hand hygiene after dressing change compliance was lowest (Hospital A: 8/113, 7%; Hospital B: 16/144, 11%). Most wound dressing practices were similar across sites, except hand hygiene prior to dressing change (Hospital A: 107/113, 95%; Hospital B: 131/144, 91%; (χ^2 7.736, p = .021) and use of clean gloves in a non-touch technique (Hospital A: 88/113, 78%; Hospital B: 90/144, 63%; χ^2 8.313, p = .016). The most commonly documented wound characteristic was type of wound (Hospital A: 43/113, 38%; Hospital B: 70/144, 49%) but what nurses documented significantly differed across sites (p<.05).

Conclusions Across hospitals, there were variations in wound practices and components of wound care documentation. Nurses' ability to use best practice is largely influenced by the clinical context, rather than clinical guidelines for preventing surgical site infection. Using an evidence-based and standardised approach to surgical wound management will reduce patients' risk of wound-related complications.

Analgesic efficacy, safety and tolerability of VPX638 (sevoflurane) administered topically to patients with painful wounds

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Objectives This first randomized, double-blind, placebo-controlled, multi-centre study aimed to evaluate the analgesic efficacy, safety and tolerability of a non-opioid, lidocaine-free novel class of topical analgesic, VPX638 (sevoflurane), in painful wounds.

Methods Eight sites in Australia recruited 78 participants. Topical administration of 5mls of VPX638 or matching placebo (saline) into the wound was performed following dressing removal, and again immediately after wound cleaning, on a single study occasion. Pain scores (0-10 scale) and use of analgesia was recorded for 24hrs. Multiple strategies were implemented to minimize the placebo effect. Local wound changes, blood chemistry, and sedation assessment to assess systemic exposure were part of the safety evaluation.

Results VPX638 treatment resulted in rapid, large and clinically meaningful analgesic effect (3.8, 95%CI:2.4-5.2 pain decrease) within 15mins. VPX638 treatment demonstrated greater analgesic effect than placebo at all time points (except 18 hours). Analyses of the Summed Pain Intensity Difference over 8, 12 and 24hrs showed a statistically significant difference from placebo ($p=0.016$, 0.009 , 0.0495 , respectively). The median duration of analgesia was 24.3hrs for VPX638 and 7.1hrs for placebo, Hazard Ratio 0.415, $p=0.0065$. VPX638 treatment also resulted in a 50% decrease in opioid use compared with placebo during 24hrs after drug administration. VPX638 was well tolerated with no local wound effects, no evidence of systemic effects, and no other safety signals.

Conclusions VPX638 has the potential to become the standard of care for the treatment of wound pain, due to its rapid onset of action, sustained analgesia, and opioid-sparing properties.

Case Study abstracts

Use of negative pressure therapy instillation, dwell time open cell foam dressing in vascular patients.

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Aim The aim is to trial the NPWTi-d on a cohort of patient's who would otherwise need repeated trips to theatre or were unable to go to theatre due to co-morbidities. To identify if there was an impact in the management including; acceleration in healing, decrease in MOT time, decrease in bed days and improved pain management.

Methods This is a case series of 8 patient's under the vascular service. The NPWTi-d Cleanse Choice™ dressing an open reticulated cell foam is was trialed using the V.A.C. Ulta™ instillation system, dwell with V.A.C. VeraFlo™. The machine and consumables are distributed by KCI and Acetiy New Zealand.

Results Significant clinical improvement in wound bed healing and granulation, reduced Mot time however length of stay not significant as this was conducted in the inpatient service. Wounds that were necrotic and would normally take months to heal had significant improvement.

Conclusion The use of NPWTi-d and cleanse choice sponge offers practitioners other options for what are very difficult wounds to heal. It is a comfortable and relatively pain free choice for complex patients. In the vascular department we see many complicated compromised wounds this is another form of wound management that we can offer.

Use of gentian violet and methylene blue impregnated foam in chronic leg ulcers

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We report a case series utilising a new dressing in Australia that combines 19th Century compounds and 21st Century technology (Gentian Violet / Methylene Blue impregnated into a Polyvinyl Alcohol or Polyurethane foam dressing). Mechanism of action is via the antibacterial effect of the Gentian Violet and Methylene Blue, along with a negative pressure and autolytic debridement effect (polyvinyl foam).

Situation Four patients with chronic leg ulcers that had failed to respond to multiple dressing regimes and surgical debridement were recruited to trial this new product. Special access Therapeutic Guidelines Administration approval was obtained.

The wounds varied in size from 1x2cm up to 25x16cm, with 3 patients having multiple ulcers. All involved the lower leg and had been present for over 10 months.

Treatment Provided The dressing is hydrated (Polyvinyl foam), applied and covered with a secondary dressing, the type depending upon exudate levels and changed once or twice per week.

Outcome In all patients, rapid improvement was seen with removal of slough and healthy granulations developing within the first 2 weeks. Epithelial ingrowth appeared and all ulcers steadily reduced in size. Inflammatory changes in surrounding skin was also significantly improved. In one patient infection developed requiring cessation of dressing. In one patient, we maintained one large ulcer on the Hydrofibre / Lipido-colloid dressing we had been using, to act as a control. An obvious improvement compared to this dressing was observed.

Lesson Learned This new wound product appears to be well worth a place in your wound care cupboard.

Empowering the workforce through digital technology

Dr Michelle Gibb¹

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Situation With the ageing population and patients becoming more complex, clinicians are being forced to deal with wounds that are challenging to treat. Many simply don't have the knowledge, skill or confidence to deal with wounds appropriately. Compounding these problems, is the paucity of high-quality, professional development opportunities in wound care that offer flexible modes of delivery.

Action(s) taken/treatment(s) provided To be able to help clinicians improve the safety and quality of care, Wound Specialist Services has developed a suite of digital wound programs dedicated to improving knowledge, skill and confidence and that foster translation of best-practice into every day clinical care. The programs are flexible enabling clinicians to learn at their own pace, anywhere and at any time. The programs progress through the basic concepts of wound assessment and wound healing and continue to more focused topics.

Outcome(s) Our digital programs help healthcare providers go from being reactive to proactive by learning what to look for and to implement best-practice strategies to better manage and prevent wounds. Drawing upon extensive experience and industry knowledge, our programs provide contemporary, evidence-based content in a format that inspires and empowers individuals to maximise their personal and professional potential.

Lesson(s) learned As busy clinicians, we understand the pitfalls of learning without guidance. Our digital wound programs give clinicians the knowledge, support and accountability they need to improve confidence in applying concepts learned to clinical practice with personalised help along the way to increase learning outcomes and thereby improve the safety and quality of care.

When you are told you have a non-healing goal; Urgo comes along!

Mrs Chloe Jansz

Healthcare United, Footscray, Australia.

Situation Mr. B 52 year old male, social worker and personal care attendant. Mr. B originally sustained a skin tear to his right lateral malleolus, from the metal brake on a patient's bed over 7 years ago, measuring approx. 6.5cm. His wound journey has fluctuated between macerated or inflamed skin edges, repeated Staph. Aureus infections requiring antibiotics, until his GP referred him. Mr. B had no venous incompetence bilaterally and appears to have had a different wound dressing from suggested every visit, trialing a multitude of antimicrobials, iodine and silver based, wound cleansers (saline and betadine), compression class 1 below knee stockings, with minimal migration. Diagnosis was suggestive of a chronic skin tear/mixed disease ulcer.

Action(s) taken/treatment(s) provided As part of the examination, there was no reported comorbidities, apart from pain. Mr B was allergic to oxycodone and tegederm. He was not on any other medications. Mr B's tetanus vaccination was up to date. There was no history of going down to the Bellarine Peninsula, but due to the longevity of the wound, pathology and a variety of swabs were completed. Further education was given on footwear and compression as Mr. B financially required to work 6 days a week up to 10 hours a day. After examination, the main concern was the maceration and discoloration of the periwound, along with Mr. B's pain.

Outcome(s) Overall, it was the TLC-NOSF technology that clearly stimulated the proliferation phase of wound healing using UrgoStart. Mr. B required no antibiotics, had reduced to non-existent pain within 2 weeks and was able to fulfill the requirements, mostly financial that his life required, after many years of being dictated by his leg.

Lesson(s) learned The success of the dressing regime gave Mr. B his life back. It taught that wound dressings have so many hidden properties to treat patients' holistically.

Foreign body induced lower limb circumferential non-healing ulcer – first reported case study

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Situation A 75-year-old man with diabetes mellitus presented with non-healing left ankle ulcer and left leg cellulitis for six weeks was referred to podiatrists.

Treatments provided Podiatric assessment revealed diminished left leg blood circulation and loss of protective sensation. Wound assessment revealed it was a partially healed linear circumferential constriction wound at the left lower leg above the ankle. Owing to the circumferential nature of wound, underlying foreign body constriction was suspected. Sterile equipment was used to probe into the wound. Rubber-band-like material was found in wound bed.

Outcomes Exploration of the left leg wound was performed by orthopaedic surgeons in view of the purulent wound discharge and suspected retained rubber band. Intra-operatively, an intact rubber band was found embedded into the subcutaneous layer in the linear circumferential wound which was about 6 cm proximal to ankle level. After the foreign body removal and intense wound care, wound healed within 3 weeks. Left leg circulation resumed normal.

Lessons learned To authors' knowledge, we are the first to describe rubber band induced ulcer in lower extremity. The patient was an elderly with diabetic neuropathy and poor self-care ability that cannot recall the reason of putting rubber band around the leg. It was believed that he may had put it there with the intention to tighten the loosen socks, which is a cultural habit commonly seen in Hong Kong. We reported this case study to increase the recognition of this uncommon but potentially devastating condition in order to prevent any irreversible gangrenous change distal to the constriction.

From 'Inevitable' to 'Unacceptable': a 5 year journey in pressure injury prevention

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Situation Pressure injuries are considered largely avoidable wounds impacting on the consumer, their family and the health system, costing \$983 million per annum in Australia. With an incidence in hospital-acquired pressure injuries (HAPI) higher than peer groups, a Wound Care Clinical Nurse Consultant (CNC) was employed in a metropolitan hospital in 2015 to investigate incidences and initiate improvements.

Actions taken Baseline data was collected on pressure injuries, nurses' knowledge and education completed. Beginning with small, ward-based quality improvement activities and expanding to hospital-wide changes preventative strategies were reviewed and updated.

Pressure injury education became compulsory and skin assessment education sessions with the Wound Care CNC were instigated. Equipment and skin care regimens were standardised. Skin assessment tools and pressure injury prevention care plans were developed and implemented. Mandatory reporting of all pressure injuries commenced and SAC 2 investigations were introduced for advanced HAPI. All pressure injuries were reviewed by the Wound Care CNC to ensure correct diagnosis and appropriate management.

Outcomes Between 2015 and 2019 the prevalence of HAPI decreased from 10.7% to 0.81% in the state-wide pressure injury prevalence survey. Documented skin assessments improved from 20% to 60%. Monthly data demonstrates an improvement in HAPIs and the hospital-acquired complications (HAC) data meets the NSW Ministry of Health targets.

Lessons learned By addressing the obvious issues first, the more challenging concerns in pressure injury prevention became apparent and are being addressed. Whilst a dedicated Wound Care CNC was the catalyst for implementing improvement strategies, teamwork is crucial to sustaining practice.

Hard to heal wounds and the role of mmp-inhibiting dressings

Ms Margie Moncrieff

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Situation Hard to heal wounds are defined as wounds that fail to heal with standard therapy in a timely and orderly manner¹. One example is a split skin graft, donor site. Usually the donor site heals between 7 - 10 days, but may take as long as 21 days². If there is non-healing beyond this time frame, the donor site can deteriorate to a hard to heal wound. There will be evidence of inflammation, with increased exudate, erythema and pain. Elevated Matrix Metalloproteinases (MMPs) contribute to the prolonged inflammation and delayed wound healing. Hard to heal wounds impact on quality of life.

Action(s) taken/treatment(s) provided MMP-inhibiting wound dressings have shown to improve healing in hard to heal diabetic foot and venous ulceration³. A case study trial of TLC-NOSF (Nano Oligosaccharide Factor) dressing on two patients with non-healing donor sites has been established. One donor site had been present seven months, the other thirteen months.

Outcome(s) An immediate outcome of using TLC-NOSF dressing was a reduction in pain, followed by reduction in exudate and erythema, to eventual healing. TLC-NOSF dressings may offer shorter healing times if initiated as soon as delayed healing is detected, rather than later.

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The management of Buruli Ulcers

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Situation Buruli ulcer is a skin infection caused by the bacterium *Mycobacterium ulcerans* (*M. ulcerans*) presenting as a slowly developing painless nodule or papule which can initially be mistaken for an insect bite. Over time the lesion can progress to develop into a destructive skin ulcer which is known in Australia Bairnsdale ulcers. Buruli ulcer was first diagnosed in the Bairnsdale area a lakes district of Gippsland Victoria in the 1930s. Since then a growing number of cases have been reported in the Bellarine Peninsula and since 2012, the Mornington Peninsula. Although the areas with risk are slowly changing, there are three recognised levels of risk within the overall endemic parts of Victoria. Everyone is susceptible to infection. While it can occur at any age, people aged 60 years and over have a higher rate of notification of Buruli ulcer in Victoria. Individuals who live in or visit endemic areas are considered at greatest risk. The bacterium produces a unique toxin known as mycolactone that inhibits the immune response whilst continuing to damage tissue. If left untreated, extensive ulceration can occur, requiring surgical management.

Action(s) taken/treatment(s) provided The Austin Hospital Melbourne is a major centre for the management of these wounds working in conjunction the Department of Infectious Diseases and the Wound clinic. A combination of rifampicin combined with clarithromycin oral antibiotic therapy for 8 weeks and topical DACC gel have been used. successfully heal these wounds.

Outcome(s) We have successfully managed these wounds with complete healing.

Lesson(s) learned The most important issues are the rapid diagnosis of a Buruli ulcer including the use of a PCR biopsy, the involvement of ID specialist and the use of evidence based treatment.

Healing beyond expectation: a case study using a trial dressing

Terry Swanson

Werc, Warrnambool, Australia.

Situation A 65-year-old male was admitted into the outpatient wound service in February with a dehisced right forefoot amputation due to peripheral arterial disease (PAD) and trauma. He had multiple factors leading to delayed healing including diabetes mellitus and end stage renal failure with increased risk for further amputation. He was triaged and consented for aggressive debridement and trial of new type of wound dressing.

Action(s) taken/treatment(s) provided The patient consented to the treatment plan of serial debridement, trial of a new dressing range, photography and publication of results. In an attempt at limb salvage he was reviewed weekly in the wound clinic after debridement, diagnostic investigations and referral back to the vascular department for further amputation of a toe on the left foot. In March he was commenced on a non-adherent hydro-desloughing absorbent dressing. One week later when the wound was cleaner, he was switched to an interactive dressing to promote healing.

Outcome(s) Although the patient continued to experience detrimental effects of his PAD and end stage renal failure the wound on the right leg healed by October.

Lesson(s) learned The staff found the dressings easy to apply and remove, cost effective and clinically effective. A team approach with holistic care included advanced wound management and topical therapies as the key to this success. He healed beyond our expectations.

Managing the challenges of chronic wound inflammation

Ms Sue Templeton

RDNS SA, Keswick, Australia.

Situation Chronic wound inflammation can result in delayed healing. The consequences of a sustained and increased inflammatory phase of wound healing include: high matrixmetalloprotease activity, local hypoxia, increased reactive oxygen species, reduced cellular activity, bacterial proliferation and biofilm formation^{1,2}. Many persons have chronic wounds that fail to heal because of chronic inflammation. Healthcare professionals managing chronic wounds might not recognise or manage chronic inflammation effectively, resulting in poor outcomes, prolonged treatment times, high costs, anxiety and reduced wellbeing. This presentation utilises a case series to provide an overview of strategies to manage chronic inflammation, improving the outcome for persons with a chronic wound.

Action(s) taken/treatment(s) provided Managing chronic inflammation requires a multi-faceted approach, addressing the person, their wound and environment³. This case series presents persons whose diagnosis was known and managed with recommended best practice, but whose wounds were still failing to progress. A combination of regular wound debridement and a dressing containing oxidized regenerated cellulose, collagen and silver-ORC was used to address the chronic inflammation.

Outcome(s) Regular wound debridement and a dressing containing oxidized regenerated cellulose, collagen and silver-ORC collagen resulted in healing in the cases presented, where best practice had not resulted in wound improvement.

Lesson(s) learned Chronic inflammation is often underestimated and might not be specifically addressed, leading to wounds that won't heal. For some wounds failing to improve despite best practice interventions, managing chronic inflammation with good wound bed preparation, including use of specialised dressings can break the cycle of chronic inflammation, resulting in improved outcomes for persons with a wound.

References

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Hope and healing - a trial of healing in bilateral limb calciphylaxis

Ms Kate Weger¹, Nurse Practitioner Tabatha Rando², Mr Damian Ley¹

¹Southern Cross Care, Glenside, Australia, ²Royal Adelaide Hospital, Adelaide, Australia .

Situation On 10/5/19 'J' a 72 year old male admitted to residential aged care from hospital post cardiac arrest with bilateral leg calciphylaxis ulcers, unable to weight-bear with severe pain and loss of mobility. 'J' had been offered bilateral lower limb amputation which he refused. Prior to hospitalisation 'J' was independent living at home with his family working and driving.

Actions taken/treatments provided Nurse Practitioner Wound Management reviewed 'J' at nursing home facility on 29/07/2019 using the H.E.I.D.I.E framework. 'J' was counselled, goals attained, education provided and commitment from 'J' and the facility team was established. Extensive, malodorous, necrotic based, full thickness wounds were present bilaterally to lower limbs. Neurovascular lower limb assessment attended and pain management was also reviewed. 'J's' goal was to heal his wounds thus extensive sharp debridement of eschar and a Trial of healing using an innovative local dressing regimen commenced. Staff committed to 'J' wounds and his goal of healing with regular input from dietician and allied health; he attended gym to strengthen legs and improve mobility, using healthy ageing approach.

Outcome 'J' discharged home from nursing home facility on 23/1/20, walking out of facility unassisted with his leg wounds fully healed. 'J' was back driving himself to dialysis and enjoying being home.

Lessons learned

- Person centred holistic assessment to offer hope and a trial of healing
- Healthy ageing team approach, exercise and importance of multidisciplinary input
- Empowering aged care nurses to be curious and having avenue for them to ask questions is fundamental and life changing

Healing the unhealable: developing high level wound care knowledge and skills in aged care

Lynn Ann Rogers¹, Kellie Whelan¹

¹RSL Care SA, Myrtle Bank, Australia.

Situation Person admitted to a small residential care facility with a total of eight injuries caused by extensive trauma and pressure injuries to lower limbs. The wounds were either necrotic or exposing bone and healing was compromised by altered sensation to lower limbs secondary to spinal cord infarct. The wounds were sustained approximately 2 months prior to admission and were described as 'non-healing'.

Action(s) taken On admission, the establishment of a complex wound reference group comprising of senior clinical nurses across the organisation convened who were responsible for all aspects of managing the multiple wounds. A nurse practitioner was sourced, outside the organisation, who confirmed the management strategies implemented by the reference group and assisted with tasks outside the scope of the residential care clinicians' practice.

Outcome(s) Over the course of 12 months, with only three nurse practitioner consultations, six wounds healed and the remaining two were almost healed prior to the resident's passing.

Lesson(s) learned We identified that even as a small provider, we had the necessary skills and knowledge to manage and treat very complex wounds combined with other complex care needs. The reference group provided us with opportunities to provide education to our broader clinicians across the organisation, rather than limiting the learnings to the individual clinicians who were providing the direct care. We did not appreciate the cost that such complex wounds would have, a factor that would need to be greater consideration for future admissions.

Poster presentation abstracts

Use of monofilament fibre debridement pad for hyperkeratosis in the community

Ms. Dianne Jooste

Anglicare, South Brisbane, Australia.

Situation 82 year old man with diabetes, congestive cardiac failure and mixed arterial vascular insufficiency had been treated in the home for diabetic health management and a chronic history of leg ulcers.

Patient was suffering from hyperkeratosis and previous treatment was an elastic tubular bandage which was left on for 24 hours a day, 7 days a week.

Action(s) taken/treatment(s) provided A solution was required which would manage the hyperkeratosis, prevent further skin breakdown and prevent bacterial or fungal build up in the feet and legs. The solution had to be cost effective, gentle on skin and ensure quick, easy removal of excessive skin and debris.

A monofilament fibre debridement pad was used to clean, remove and descale the hyperkeratosis without damaging healthy skin.

Outcome(s) After initial treatment with monofilament fibre debridement pad, there was visible improvement and reduction in hyperkeratosis, no itch and reduction in odour. Once dead skin and hyperkeratosis was removed, patient was put on a structured skin care regime including cleansing, exfoliation and replenishing the skin barrier using emollients.

Lesson(s) learned Hyperkeratosis of the lower limb is a common skin condition that typically affects patients with chronic venous insufficiency. Patients are often embarrassed by the appearance of their skin, the hyperkeratotic scales and the unpleasant odour. The monofilament fibre debridement pad can be used by all healthcare professionals working in the community, and by patients. It's effectiveness and ease of use may encourage patients or carers to take an active role in their care.

Treatment of post-surgical toe wound with monofilament fibre pad and second generation ionic hydrogel dressing

Ms. Amanda MacKillop

Advanced Therapy Solutions, Greenslopes, Australia.

Situation 44 year old man with chronic history of gout in many joints. The patient had surgical intervention on right big toe due to infection of joint, pain and bone osteomyelitis.

At 2 week post-surgery, the patient experienced delayed healing, pain and odour from the wound. On presentation, the wound had heavy thick slough, undermining of edges and slight hypergranulation at base of wound.

Action(s) taken/treatment(s) provided Monofilament fibre lolly was used to clean wound bed, disrupt and remove biofilm and slough. Second generation hydrogel dressing then applied to wound bed for autolytic debridement and softening of slough. Pain relief was instant and patient no longer required oral pain medication. Biocellulose hydrobalance dressing was also applied at day 4 to improve and speed up epithelialisation process.

Outcome(s) Patient and clinician happy with progress in first 7 days. The treatment and dressings reduced pain and allowed the patient to walk and wear his own shoes. Wound was fully healed after 26 days.

Lesson(s) learned The use of monofilament fibre lolly combined with additional autolytic debridement with second generation ionic hydrogel dressing helped to prepare the wound bed and removed slough, debris and other barriers to healing. Further treatment with hydrogel dressing and hydrobalance dressing helped to create optimal conditions for wound healing.

Use of Bacteria and Fungi Binding Surgical Dressings to Prevent Surgical Site Infections

Mrs Anne Carr, Mr David Chong (Plastic Surgeon)

Bundoora, Australia.

Situation/ Introduction Dressings don't heal wounds however using Bacteria Binding Dressing with every dressing change, the reduced bacterial load helps to create optimum conditions for the natural wound healing process. Many of our patients are elderly and have comorbidities such as diabetes and obesity which means the need to control complications from increased microbial load and prevention of infection is critical.

Method In our practice, any patient undergoing excision of a lesion (+/- flap repair) below the knee has a Bacteria Binding Surgical Dressing applied directly to the wound following closure. These types of post-operative dressings are also used on surgical wounds greater than 6cm in length. In high risk patients Bacteria Binding Dressing is replaced and left on for another week.

Results/Outcome Data collected from our post-operative patients (over a 4 month period) showed 91% were fully healed in 2 to 3 weeks by using Bacteria Binding Surgical Dressings.

Conclusion As opposed to commonly used antimicrobial dressings, Bacteria Binding Dressing releases no chemical agents into the wound. The unique DACC-Coated dressing selectively binds hydrophobic microorganisms, ensuring that bacteria and fungi are retained on the dressing. When it comes to wound healing, it is vital to ensure that healing is as fast and as effective as possible. Bacteria Binding dressings are considered not only cost effective but have reduced surgical site infections in our practice.

A quality improvement programme to reduce pressure injuries in an aged residential care facility

Sharryn Cook

¹District Nursing Service Nelson Marlborough District Health Board, Blenheim, New Zealand.

Situation 77-year-old gentleman living in a rest home facility developed a sacral pressure injury that increased from stage 1 to a stage 3-pressure injury within months. Patient's mobility had decreased over the last few months and he spent more time in bed at an aged residential facility (ARC). Patient had poor nutrition and was incontinent of urine. Patient declined to be repositioned and a stage 3, pressure injury developed on his sacrum.

Pathophysiology Pressure Injuries are areas of damaged skin developed over bony prominences due to sustained pressure or combined with shear and/or friction. A stage 3, pressure injury involves full thickness skin loss potentially extending into the subcutaneous tissue layer. Evidence shows most pressure injuries are preventable with early identification of patients "at risk" and subsequent effective management.

Action taken/treatment provided A team approach using the collaborative framework "SSKIN bundle" (Skin inspection, Surface, Keep moving, Incontinence, Nutrition) was introduced by a district nurse to improve nursing practice and support a sustained improvement in pressure injury prevention and management in the ARC facility.

Outcome Improved quality and safety for the prevention and management of pressure injuries demonstrated with a decline in the occurrence of pressure injuries at the ARC. The patient's condition and his quality of life improved.

Lesson learned The aim of this initiative was to achieve and maintain a reduction in incidence and prevalence of avoidable pressure injuries within an aged residential care facility by educating staff on the understanding and application of the evidence based "SSKIN bundle" (Skin inspection, Surface, Keep moving, Incontinence, Nutrition) plan.

References

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Unique management of suprasternal notch fungating wound

Ms Leigh Davies

SJOGH Murdoch, Willetton, Australia.

Objective Identify how an innovative change in wound care was used to manage a large fungating, invasive tumour

Background Mr D.C was a 47yr old was admitted to the Hospice unit for symptom management of metastatic squamous cell carcinoma of neck and tongue. On admission he presented with a large fungating tumour arising at the Sternal notch. The sternal notch is the depression in the top of the sternum between its articulations with the right and left clavicles. It was a difficult wound to manage and required frequent dressing changes due to the volume of exudate. This was causing distress to the patient and staff who were finding the situation very confronting. Incorporating an Eakin wound management pouch into the care plan enabled containment of the exudate, reduction in odour and an increase in Mr D.C's self-image.

Situation The sternal wound was heavily laden with tenacious slough and there were bone protruding from each side of the sternal notch, identified as the clavicular bones. A large volume of haemopurulent, malodorous exudate was draining from the wound bed. He was experiencing pain in his shoulders, neck and periwound surface on light touch due the underlying metastatic disease.

Conclusion Using an alternative plan to manage a wound can be beneficial to the patient, their family and visitors and also to the caregivers. Knowing that Mr D.C was at the end stage of his life, being able to improve his self-image and positive social interaction with others was an amazing outcome.

Tegaderm™ clear acrylic absorbent dressing: unique management of radiation burns

Ms Leigh Davies, Mrs Michaela Buttery SJOG

Murdoch, Murdoch, Australia.

Objective Mr Dob was undergoing radiation therapy for squamous cell carcinoma facial tumours arising on his left cheek, temple, eyelid and extending to corresponding lymph nodes. He had completed 10 treatments of a planned 30 sessions of radiation therapy. Mr Dob was admitted via the emergency department for wound management and pain control. He was also having scheduled blood transfusions for an underlying history of Myelofibrosis.

Situation The dressing was due to be changed however he was at risk of bleeding and the pain was excruciating. The wound bed was covered in a thick layer of adherent dressings consisting of a tulle gras dressing and calcium alginate fibres. These had been applied after an extensive bleed where Mr Dob required transfusion of 4 units packed cells and 2 units of platelets at another hospital. His anxiety around having the dressing touched or changed was increasing and with the risk of further trauma and bleeding exacerbated his fears. The patient described this as being similar to 'Battle fatigue.' When considering options for ongoing dressings we focused on managing his pain as a priority, ease of removal and being able to continue his radiation therapy. It was then decided to apply a Tegaderm™ Clear Acrylic Absorbent dressing (1).

Outcomes The success of this dressing and its application and ongoing wound management will be described in the poster. This poster will outline the dressing plan and pain management and the resulting outcomes of care and the benefits to Mr Dob.

References

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The client and family experience of attending a nurse-led clinic for chronic wounds

Miss Anusuya Dhar¹, Dr Judith Needham¹, Dr Michelle Gibb², Dr Elisabeth Coyne¹

¹Griffith University, Logan, Australia, ²Wound Specialist Services Pty Ltd, Brisbane, Australia.

Objectives The aim of this study was to explore the client and family experience of attending a nurse-led clinic for chronic wounds in the community.

Methods A qualitative descriptive study design was used to understand the participants' experience. The clinic was developed as part of a pilot project in South-East Queensland and convenience sampling was used to recruit study participants. Semi-structured telephone interviews were conducted and professionally transcribed verbatim. Family members completed their interview separate to the client. Content analysis was undertaken, and common themes were established.

Results Twelve clients and two family members participated in the study. The average age of participants was 66 years old and most clients (n=5) attended the clinic on less than three occasions. Three common themes were found: the impact of chronic wounds on daily life, benefits of attending the clinic and challenges of attending the clinic. Participants discussed how the clinic influenced their daily life, specifically regarding pain and the inability to complete regular tasks. Benefits of the clinic included receiving expert advice, client satisfaction and physical accessibility. Challenges of the clinic were cost and minimal client education.

Conclusions This research demonstrates the benefits of attending nurse-led clinics for chronic wounds however further improvements are needed to optimise this experience for consumers. Comprehensive pain assessments, better social support, improved client education and cost-effective care is required to maximise the level of care for people with chronic wounds.

Sufferance in Silence in the Dementia Patient

Mrs Dyesebel Dinglasan

MINH-Melbourne Health, Melbourne, Australia.

Background The presence of pain in a person with dementia can easily be missed, and is frequently confused with (BPSD) such as resistance or aggression. Untreated pain has a major impact that reduces quality of life for this population group and can lead to increased discomfort and distress. Failure to recognise pain can lead to the inappropriate prescription of antipsychotic medication. In (RACFs), failure to recognise and treat pain can cause decreased social integration as relatives withdraw from visiting due to anxiety over their loved ones behaviour.

Situation The challenges in the assessment of pain in people with dementia, due to both medical and psychiatric disorders, means that there are difficulties in establishing good pain management practice for these residents. Poor knowledge and training of staff and management in long-term care are important barriers to high quality care.

Action(s) taken/treatment(s) provided Our UNIT focuses on residents with concurrent psychiatric support needs. Education was developed combining dementia and pain. The focus was on non-verbal signs of pain. A pain champion program was established to support ongoing education and identification. Even experienced staff would be expected to benefit from specific education and training in pain assessment, pharmacological treatment, pain neurophysiology, and non-pharmacological treatments.

Lesson(s) learned Staff awareness and understanding that even though our clients cannot verbalise, it doesn't mean everything is okay. This practise enables staff to apply a holistic approach in assessment to acknowledge potential pain then that of behavioural presentations

Outcome(s) Our team has become aware of the relationships between pain, discomfort, and agitation; and we determined the influence that pain management has on decreasing the outcomes of discomfort, agitation, and confusion on our residents.

Using bacteria binding dressing with NPWT in an acute hospital to heal abdominal dehiscence wound

Mrs Bataa El-erakey

Warringal Private Hospital, Heidelberg, Australia.

Background Mr KL is 78 years of age with pancreatic cancer. Treated with Whipple procedure (pancreaticoduodenectomy) complicated by abdominal wound dehiscence and intra-abdominal wound collection/ sepsis. Post-surgical wound dehiscence are often complicated wounds subject to delayed wound healing due to bioburden and local pressure.

Wound Management (progress) Initially a NPWT dressing was applied combined with an antimicrobial bacteria & fungi binding dressing used as the contact layer. The Bacteria binding dressing helped protect the wound bed from the foam filler, manage the bioburden and assisted in removal of slough.

After 8 weeks the NPWT was discontinued and Bacteria binding dressing was continued to be used with a foam dressing to manage the exudate.

Outcomes The wound prior to the use of Bacteria binding dressing and NPWT was 17.3cm x 7.2cm and 4cm Depth. At 8 weeks NPWT was discontinued. Bacteria binding dressing was in use for the entire period. At 14 weeks the wound was almost healed.

Conclusion In contrast to commonly used antimicrobial dressings (e.g. Silver) Bacteria binding dressings release no chemically active agents into the wound. It works by a physical mode of action – hydrophobic interaction, binding and removing bacteria and fungi from the wound (1.) Therefore, it can be used as prevention in wounds that are at risk of infection or re-infection, and throughout the entire healing process in wounds that are infected. Bacteria & Fungi binding dressings can be used without restrictions (there are no known contra-indications) and is cost effective in use.

References

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Transforming wound outcomes through digital technology

Dr Michelle Gibb

Wound Specialist Services, Samford, Australia.

Situation As the wound problem continues to grow with population ageing, the role of digital technology can no longer be ignored. Digital technology is a solution to many of the challenges facing the wound care industry. It can achieve equal or better outcomes than traditional care in terms of patient outcomes, is more efficient and cost-effective, and both enables and empowers care providers.

Action(s) taken/treatment(s) provided Wound Specialist Services uses digital technology to help care providers work differently and is an example of both innovation and entrepreneurship that is transforming the aged care and community care sector. Our solution comprises both synchronous and asynchronous telehealth to support health professionals at the point-of-care and improve access to wound expertise.

Outcome(s) Wound Specialist Services gives healthcare providers the key ingredients they need to improve the safety and quality of care – access to real-time, point-of-care support, specialist advice and practical, evidence-based strategies that can be implemented into everyday clinical practice.

Lesson(s) learned In wound care, there is significant scope for innovation using digital technology. Wide scale adoption of digital technology will be essential in order to sustain the healthcare system into the future. Digital technology has been demonstrated to reduce costs, increase access, overcome geographic distance and shortages of health professionals whilst still providing a versatile and personalised approach to care.

Supporting new spinal cord injury clinicians to deliver wound care

Ms Grace Manjoro, Mrs Lucija Lavrencic

¹Royal North Shore Hospital, St Leonards, Australia.

Situation Wounds affect patients' quality of life and result in prolonged hospital stays, expense for both patients and the health system. Nurses looking after patients with spinal cord injury (SCI) encounter severe pressure injuries. Wound management is a pivotal part of care and relies on good wound assessment and wound skills. A gap in wound care knowledge and skills was identified in graduate and newly employed nurses in the Spinal Unit.

Actions taken To identify learning needs and provide education in the most suitable modality for nurses who recently commenced working in the Spinal Unit. A survey was undertaken to identify learning needs and preferred modalities for education. Based on these findings an education package was developed to meet the needs and preferred modalities. The education package was evaluated by a pre- and post-questionnaire.

Outcomes The survey confirmed that nurses preferred a face-to-face training across all aspects of wound management. The education package comprised of a series of brief PowerPoint presentations covering a range of topics, supported by an education booklet detailing the range of wound products, as well bedside peer supported learning. The post-questionnaire indicated significant improvement in wound management knowledge and skills

Lessons learned Nursing staff who completed the education package reported that the package was useful and contributed to higher levels of confidence and skills in wound assessment and management. Nurses were motivated and competent to deliver complex wound care.

Striving for a “Clearer” patient journey

Mrs Doreen Mckeever

Wairarapa DHB, Landsdown, New Zealand.

The Health Quality Safety Commission New Zealand have deemed the following priorities of consumer engagement, surveillance and reporting and increased priority in managing clinical deterioration. (1) The New Zealand Surgical Site Infection Improvement project aligns and supports best practise. Two key performance indicators are improved access to surgery and shorter stays in Emergency departments. (2) Whilst surgical wound complications were not a common problem it is widely acknowledged as catastrophic if they did occur, with the journey for patients having significant impact on their wellbeing.

Situation A rising global focus in the area of acute surgical wounds supported our desire to review our Orthopaedic surgical wound pathways. Current wound protocols for arthroplasties was costly and not aligned with recent recommendations

Action(s) taken/treatment(s) provided The three-month project involved a cohort of elective orthopaedic indications. The twelve-month continued use of the new dressing regime involves the surgical wound being undisturbed from the operating theatre until review and removal of sutures on Day 10-14.

Outcome(s) An audit demonstrated the new protocol was used in 68 out of 79 cases with two cases requiring review prior to Day 10-14 day. This aligns with SWD Consensus document recommendations of minimising disturbance and allowing monitoring and earlier identification of surgical wound complications.

The new dressing is comfortable and conformable for patients and significantly minimises the risk of shearing or blistering, rarely causing sensitivity.

Lesson(s) learned Surgical wound dehiscence is less understood and coupled with rising comorbidities, age and shortened length of stay, the challenges of Post Discharge Surveillance will continue

<https://www.hqsc.govt.nz/our-programmes/infection-prevention-and-control/projects/surgical-site-infection-improvement/resources/>

<https://www.health.govt.nz/new-zealand-health-system/health-targets/about-health-targets>

<https://www.woundsinternational.com/resources/details/consensus-document-surgical-wound-dehiscence-improving-prevention-and-outcomes>

Linking District Nursing Services across the region to achieve wound success.

Mrs Rachel O'Dwyer

NCN Health Numurkah, Numurkah, Australia.

Objectives To connect district nursing services across the region with the intent of sharing resources and improving wound care outcomes between smaller and larger services. To evaluate, challenge and change existing practice s in a support ed environment to standardize practice and gain wound success across the region.

Methods The establishment of the link clinician group provided collaboration and networking across ten community services in the region. Together we collectively supported each other, shared ideas, and challenged our current practice to improve wound outcome s for our clients. Meetings were held four times a year at a central location. Through gap analysis inefficiencies and inconsistencies of practice were identified. Interventions and strategies were developed within the group. Evolution of the group gained momentum and provided a platform for innovation and change to the current way we deliver wound care to our clients.

Results All ten services collected data which provided a comparison and identified service gaps for ways to improve the standard of wound care being delivered. Linking the services increased staff engagement and provided support to the smaller isolated services who found this particularly beneficial. Collaboration within services for all things wounds resulted in a more holistic and standardized approach.

The 'link clinician' relayed messages and new learning s to their retrospective services to challenge, enhance and align wound care deliver y using evidenced based practice.

Conclusions Connecting clinicians together proved to be a valuable resource in the steps to changing practice and delivering evidence based 'gold care to our clients with wounds

Linking steps to wound success

Megan Ryan

Seymour Health, Seymour, Australia, ²Goulburn Valley Health, Shepparton, Australia, ³Yea and District Memorial Hospital, Yea, Australia, ⁴Alexandra Hospital, Alexandra, Australia, ⁵Numurkah District Health Service, Numurkah, Australia.

Objectives To link key stakeholders together so connection, collaboration and innovative strategies can be adopted to improve wound care outcomes that meet the needs of the service and the clients.

Methods The climb started by linking together to engage and support each other. The collective group meet four times a year since inception in 2014. The group identified differences and inconsistencies in the wound care being provided to respective clients through gap analysis, data collection, exploration and experiences. KPI's were established around the collection of data. Over time as a collective linking together provided a platform for taking small steps which drives changes being implemented to current wound care practice ensuring more standardisation, evidence based, achievable and measurable wound care success.

Results Wound success was achieved through standardising practice. All services have the same wound care framework guiding assessment and management of chronic wounds. The standard of wound care has been raised to align with evidenced best practice.

Each service aims to deliver wound care with the same expectation using the same wound care charts, aetiologies, dressing products, expectation of healing rates, wound escalation, education, tools and resources. The services are talking the same language and gaining confidence in the wound care being delivered.

Conclusion Linking together and taking one step at a time to change and adapt processes and systems in order to transition evidence into practice has succeeded in elevating the standard of wound care being delivered in a supportive and innovative environment.

Wound escalation of care (WEC)

Mrs Tania Stuart¹, Ms Gabrielle Munro¹

¹Goulburn Valley Health, Shepparton, Australia.

Objective The purpose of the Escalating Wound Care initiative, was to ensure clients receive efficient and timely interventions that promote best practice care, incorporating collaboration between consumer and the health care service, to improve healing rates. By the implementation of a four weekly escalating wound care assessment, through the review of weekly measurements and tracing of wound size, aiming for an improvement by 20-40% over four weeks.

Methods The district nursing service implemented a system change for all new wounds. Within 10 days a comprehensive assessment in the wound clinic was offered to all clients and a plan of care was developed. Profiles were set up on the client's database to evaluate the wound size at 4 week intervals with the expectation of a 20-40% improvement in size.

Escalation in care was actioned if the expectation wasn't being met, and a transdisciplinary model of care was adopted. The staff member performing the 4 week assessment would present the findings to their peers using the TIME framework. Review of the plan of care was discussed and appropriate referrals to service providers identified.

Results The service found 80% of clients were discharged from our service within 8 weeks. Approximately 72% of clients are healed upon discharge.

Conclusion Through the implementation of a system change within the service, we have been able to gain baseline data of healing rates. The service found through regular monitoring of wound size and early referral to service providers, ensured the clients outcome improved through timely intervention.

Use of rapid capillary action dressing to heal chronic wounds

Ms Del Tennant

Private Hospital, Perth, Australia.

Situation Mrs B was an 83-year-old female who was admitted after spiking temperatures and increasing pain to her right leg. After falling 5 weeks prior and sustaining a large laceration to her right lateral knee and calf she was taken to her nearest emergency. She was sutured at the ED and sent to her local General Practitioner for follow up for 4 weeks prior to presentation. The wound continued to deteriorate and with spreading infection the GP referred her for admission.

Method - Actions taken/ Treatment provided The wound was very painful and copious amounts of yellow fluid was trapped within a large cavity found extending down into the mid-calf area. Due to the depth of the wound and amount of fluid, a Rapid Capillary Action dressing was chosen. A high absorbency silicone dressing was then used to secure and absorb.

Outcomes Using a Rapid Capillary Action dressing healed this very large complex wound in just 12 weeks. Given the complications and overall health of the patient this was an extremely positive result.

Lessons Learned This case demonstrates the advantages of using a Rapid Capillary Action dressing to de-slough, debride and remove excess fluid from the wound bed. Its fast action, ability to maintain adequate moisture and excellent management of oedema allows for faster healing of complex chronic wounds.

References

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A quality improvement project to prevent and manage operating room acquired skin tears

Julie Ward¹, Rebecca Fox¹, Sue Monaro¹

¹Royal North Shore Hospital, St Leonards, Australia.

Objectives Perioperative skin tears are often preventable injuries. We aimed to improve their management in our 20-suite operating theatre situated in a 700-bed metropolitan tertiary referral hospital where over 18,000 surgeries are performed every year, and to understand risk factors to focus our prevention strategies.

Methods An initiative to manage skin tears using best practice began with the introduction of skin tear boxes. Education via a table-top product display, extensive in-servicing, and the monthly publication of Operating Room acquired skin tears in a high traffic area in the department was commenced. The boxes contained management flowcharts, incident notification instructions, and products for cleansing and dressing. After implementation, a review of skin tear documentation and management capturing a range of variables was undertaken.

Results According to incident management data, compliance with the recommended method of management went from 0% to 64% post implementation of skin tear boxes. Forty-two skin tears were sustained in a twelve-month period (December 2018 to November 2019). Patients with skin tears were on average 77.5 years old, 85% had an Anesthetic Society of America classification score of 3 or 4, and happened during orthopaedic surgery. The main cause was manual handling. Medical Adhesive-Related Skin Injuries also occurred to the eyes and from drape removal.

Conclusions Staff education and designated skin tear boxes were effective in increasing best practice for managing skin tears. Further initiatives include an arm awareness project, targeting older patients undergoing emergency orthopaedic surgery, and an alternate product for eye protection.