

Wounds digest

In this section, a brief synopsis is presented of a range of recently published articles that may be of interest to healthcare professionals working in the wound care setting. The aim of this round-up is to provide an overview, rather than a detailed summary and critique, of the research papers selected. Full references are provided should you wish to look at any of the papers in more detail.

1 Nutritional management of older hospitalised patients with pressure injuries

Readability	✓	✓	✓	✓	
Relevance to daily practice	✓	✓	✓	✓	✓
Novelty factor	✓	✓	✓	✓	

- The authors conducted a cross-sectional, multicentre study designed to examine nutritional management in individuals aged 70 years or above that have/or are at risk of developing pressure injuries.
- The study involved 1,412 patients from across 33 hospitals and 208 wards; the authors used a standardised questionnaire to collect demographic data, as well as data focusing on care dependency, malnutrition risk, risk for/prevalence of pressure injuries, and nutritional interventions, after which data analyses were conducted by using descriptive statistics, chi-square tests, or independent t-tests.
- A total of 678 patients (48.0%) were found to be at risk of developing a pressure injury/injuries, according to the Braden Scale, while 71 patients (5.0%) were found to have at least one pressure injury when their skin was assessed. The nutritional interventions that were most commonly conducted in the patients with pressure injuries were the provision of mealtime support (50.7%), providing food that had been specifically identified by the patient themselves (40.8%) and malnutrition screening (39.4%).
- It was found that just one quarter of the patients in the study were referred to a dietitian, while the provision of an energy-enriched diet, energy-enriched snack or oral nutritional supplements was found to be rare (18.3%, 12.7% and 8.5%, respectively). Therefore, in conclusion, it was argued that nutritional care in older patients with risk of pressure injuries is suboptimal and awareness needs to be improved regarding the importance of this topic.

Eglseer D, Hodl M, Lohrmann C (2018) Nutritional management of older hospitalised patients with pressure injuries. *Int Wound J* doi: 10.1111/iwj.13016. [Epub ahead of print]

2 Preliminary experience of an expert panel using Triangle Wound Assessment for the evaluation of chronic wounds

Readability	✓	✓	✓	✓	
Relevance to daily practice	✓	✓	✓	✓	
Novelty factor	✓	✓	✓	✓	

- This pilot study was carried out to determine the extent of the use of the Triangle of Wound Assessment (TWA) in the authors' clinical practice in Spain. The TWA has historically focused on the wound

bed in particular, which includes a holistic evaluation of the patient with a wound.

- Patients over the age of 18, both male and female, who had wounds of any aetiology and duration, and who attended the centres involved in the study, were then recruited between May and June 2017. During the first presentation, the TWA was utilised to assess the wound bed, edge and periwound skin. Once assessment had taken place, the expert panel convened to discuss the results obtained, allied with the advantages and disadvantages of the system.
- A total of 90 patients were included in the study and non-viable tissue (necrotic/sloughy) was recorded in 57.8% of these patients, while elevated exudate (medium/high) was recorded in 52.2%. Meanwhile, signs or symptoms of local infection were found in around 25% of the patient group. The most common issue found was maceration on the wound edge and periwound skin, affecting 31.1% and 30.0% of the patients, respectively.
- TWA's implementation could aid clinicians in terms of fostering a holistic approach to patient care through a renewed focus on more than local wound care.

Lazaro-Martinez JL, Conde-Montero E, Alvarez-Vazquez JC et al (2018) Preliminary experience of an expert panel using Triangle Wound Assessment for the evaluation of chronic wounds. *J Wound Care* 27(11): 790–6

3 Epidemiology of venous leg ulcers in primary health care: incidence and prevalence in a health centre — a time series study

Readability	✓	✓	✓	✓	
Relevance to daily practice	✓	✓	✓	✓	
Novelty factor	✓	✓	✓		

- This retrospective study aimed to describe and analyse the temporal trend of venous leg ulcer (VLU) prevalence and incidence between 2010 to 2014 in people aged over 40 years in a primary care centre in Barcelona, Spain; the authors then sought to establish healing times and temporal trends, as well as evaluate related aspects, such as the use of the Ankle-Brachial Pressure Index (ABPI) in a primary care health centre.
- A total of 3,920 electronic health records were reviewed per year over the 2010–2014 period, and a diagnosis of VLU was based on the ICD-10 diagnoses. In terms of prevalence, the researchers considered any patient with an active VLU in the year of study. Incidence, meanwhile, the researchers considered those patients with a new VLU in the year of study. Variables were examined according to the years of study by one-factor analysis of variance (ANOVA) or the Kruskal-Wallis non-parametric test, where applicable.

- One-hundred-and-thirty-nine patients met the VLU criteria with only 79.2% classified as having a VLU with a correct ICD diagnosis. Incidence was found to rise from 0.5 new cases per 1,000 people/year in 2010 to one new case for every 1,000 people/year in 2014. Prevalence ranged between 0.8 and 2.2 patients with VLUs for every 1,000 people/year. Between 2010 and 2014, 84.2% of all VLUs healed, with lesions taking less time to heal.
- The study found that women over the age of 70 were the main patient group affected by VLUs. The frequency of VLU occurrence was found to rise continually over the years of the study, but healing times reduced, while the use of ABPI improved. Care may be improved by assigning a reference nurse to the wounds unit.

Berenquer Perez M, Lopez-Casanova P, Sarabia Lavin et al (2018) Epidemiology of venous leg ulcers in primary health care: Incidence and prevalence in a health centre — a time series study (2010-2014). *Int Wound J* doi: 10.1111/iwj.13026. [Epub ahead of print]

4 Budget impact of antimicrobial wound dressings in the treatment of venous leg ulcers in the German outpatient care sector: a budget impact analysis

Readability	✓	✓	✓	✓	✓
Relevance to daily practice	✓	✓	✓	✓	✓
Novelty factor	✓	✓	✓	✓	✓

- Hard-to-heal wounds are predominantly treated in the outpatient care sector in Germany and are traditionally associated with high treatment costs. In order to address this latter point, the authors examined the effect of the antimicrobial dressing choice on spending in outpatient care by investigating the cost impact of Cutimed Sorbact.
- A budget impact analysis was performed, which compared three different scenarios of the intervention mix of antimicrobial dressings, and a Markov model was used to estimate venous leg ulcer (VLU) progression during one year.
- While confirming the high treatment costs of VLU care, the study found that treatment costs were reduced by 20.86% after 12 months when using Cutimed Sorbact. Although the treatment of people with VLU may result in budget exceedance per patient available to the clinician, the wound dressing choice may positively affect the prescribers' budget spending in terms of outpatient care.

Guelztow M, Khalilpour P, Kolbe K, Zoellner Y (2018) Budget impact of antimicrobial wound dressings in the treatment of venous leg ulcers in the German outpatient care sector: a budget impact analysis. *J Mark Access Health Policy* 6(1):1527654

5 Evaluation of fluorescence biomodulation in the real-life management of chronic wounds: the EUREKA trial

Readability	✓	✓	✓	✓	
Relevance to daily practice	✓	✓	✓		
Novelty factor	✓	✓	✓	✓	

- A form of photobiomodulation (PBM) called fluorescence biomodulation (FB) has seen its use increase in a clinical setting,

where it is used to induce wound healing in wounds that remain recalcitrant to treatment.

- The aim of the EUREKA (EvalUation of Real-lifE use of Klox biophotonic system in chronic wound mAnagement) multicentre, prospective, observational, uncontrolled study was to confirm the efficacy and safety of LumiHeal, which is a system based on FB, in a real-life clinical setting, when treating chronic wounds, such as venous leg ulcers (VLUs), diabetic foot ulcers (DFUs) and pressure ulcers (PUs).
- One hundred patients were enrolled in the study across 12 clinical sites in Italy. Wounds were cleansed with saline and a 2mm thick layer of a chromophore gel was subsequently applied to the affected area, biweekly. The wound area was illuminated with the LED activator for 5 minutes from a distance of 5cm.
- Forty-seven patients experienced total wound closure — 26 were VLUs (50% of all VLUs); 16 were DFUs (50% of all DFUs); and five PUs (33.3% of all PUs). Significant mean wound area regression at last study assessment was found for VLUs (41.0%; $P < 0.001$) and DFUs (52.4%; $P < 0.001$). It was possible to significantly predict if an ulcer would respond to the study treatment after four weeks of treatment. The FB system's positive efficacy profile was confirmed in these wounds with the treatment found to be safe and well tolerated by patients, with a significant improvement in patient QoL.

Romanelli M, Piaggese A, Scapagnini G et al (2018) Evaluation of fluorescence biomodulation in the real-life management of chronic wounds: the EUREKA trial. *J Wound Care* 27(11): 744–53

6 Advances in upper extremity scleroderma wound care

Readability	✓	✓	✓	✓	
Relevance to daily practice	✓	✓	✓		
Novelty factor	✓	✓	✓	✓	

- The aim of this study was to provide information regarding the pathophysiology, diagnosis, and management and treatment options for systemic sclerosis in the upper extremities.
- Using PubMed as a resource, an online literature review was conducted for all publication dates to October 2017, with the search terms used including: "systemic sclerosis," "scleroderma," "management," "upper extremity," "hypercalcinosis," "Raynaud's phenomenon," "sympathectomy," and "digital ulcers".
- Under review specifically were the epidemiology, pathophysiology, diagnosis, upper extremity manifestations, and medical and surgical management of systemic sclerosis.
- In conclusion, it was reiterated that systemic sclerosis is a rare rheumatologic disease that has a detrimental impact on people's quality of life. Although it was discovered that medical management of the condition is the central plank of treatment, which has helped cumulative survival rate increase from 54% in the 1970s to 66% in the 1990s, the pathophysiology of systemic sclerosis remains poorly understood. Surgical approaches become critical when management strategies fail.

Cohen JM, Sibley RA, Chiu ES, Sharma S (2018) Advances in upper extremity scleroderma wound care. *Adv Skin Wound Care* 31(10): 446–55