Pressure Injury Current Awareness Service

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Introduction: Pressure injuries (PIs) are a serious, avoidable condition that affect many patients during hospital stays. Yet, to date, there is no comprehensive assessment of the financial and clinical risks of PIs.
Objective: This study evaluates the cost of treatment, impact of reimbursement policies, and clinical consequences of PIs for US hospitals.
Methods: A financial and clinical calculator was created to estimate the impact of PI prevention using a traditional literature review to drive assumptions.
Results: Two drivers of hospital revenue loss resulting from PIs were identified: nonpayment for PI treatment by health insurance providers and personal injury litigation. Increased hospital length of stay (LOS) and patient mortality associated with PIs further contributed to negative consequences. For an average 160-bed hospital, the authors estimated an annual total financial risk of $597 million, 911 days added to LOS, and 164 deaths related to avoidable PIs.
Conclusions: Results of this analysis will be useful for health care organizations implementing quality improvement initiatives and new technologies, such as digital wound care management systems, to reduce the prevalence of PIs, thereby protecting patients and mitigating financial and clinical risks.

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Ayello, E A and R G Sibbald (2019) "Pressure Injuries: Nursing-Sensitive Indicator or Team- and Systems-Sensitive Indicator?" Advances In Skin & Wound Care 32(5): 199-200

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Nasotracheal intubation is routinely used in patients undergoing oral and maxillofacial surgery when intermaxillary fixation is needed either intraoperatively or postoperative. Various complications can occur such as epistaxis, turbinectomy, retropharyngeal dissection, tympanitis, and nasal alar pressure sore or necrosis, especially when there is a prolonged nasotracheal intubation. The first report of a nasal alar necrosis after prolonged nasotracheal intubation was published by Hatcher et al in 1968. Since then, several reports of skin necrosis of the nasal alar region have been published and attributed to a prolonged operation or the technique used in tube placement. Pressure ulcers are a localized damage to the skin and underlying soft tissue and usually appear immediately after the procedure. They may be painful and can cause a cosmetic problem for patients. The literature has several studies of nasal alar necrosis after nasotracheal intubation for head and neck reconstructive surgery, but there is no description of this complication after orthognathic surgery. This paper describes the occurrence of skin nasal alar necrosis following a bimaxillary jaw correction and highlights recommendations for its management and prevention.

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Aim: To investigate the distribution of pressure injuries among older adults in China and to identify the associated risk factors.
Design: Cross-sectional study.
Methods: The identified subjects were collected from 2012 wave of a national Chinese Longitudinal Healthy Longevity Survey. Older people were defined as being 65 years of age or older. We used chi-square test and binary logistic regression to investigate the risk factors of pressure injury development.
Results: A total of 55 older people were documented as suffering from pressure injuries among 6,961 older Chinese adults, with a prevalence of 0.8%. In the group of disability, the prevalence of pressure injuries from high to low was 36% in the highly limited group, 04% in the
moderately limited group and 03% in the not limited group The prevalence of pressure injury among older people with stroke, cancer and dementia were 2%, 42% and 66%, respectively According to the final binary logistic regression analysis, age, disability, incontinence, cancer and dementia emerged as important risk factors for pressure injury development; Conclusion: Pressure injury among Chinese community-dwelling aged people was shown to be associated with age, disability, incontinence, cancer and dementia As the development of pressure injury may distinctly increase the burden on individuals and health care systems, the social and related institutions should actively prevent and control the disease; Impact: The results of this study will improve the identification of pressure injury among older Chinese people and contribute to the development of effective pressure injury risk management interventions This article is protected by copyright All rights reserved; This article is protected by copyright All rights reserved

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Background: Pressure ulcers pose an important quality-of-care challenge in nursing homes, with serious consequences for residents' health We assessed the scalability of the On-Time Pressure Ulcer Prevention (On-Time) intervention strategy, developed by the Agency for Healthcare Research & Quality, in nursing homes nationwide; Intervention: On-Time uses electronic health record reports to identify changes in resident pressure ulcer risk and facilitate multidisciplinary input into clinical decision making; Objective: To assess the scalability and impact of On-Time on pressure ulcer incidence in nursing homes; Design: We used quasi-experimental methods, employing a difference-in-differences design, to compare the pre-post trends in pressure ulcer incidence in the treatment and comparison homes; Setting and Participants: The study population included long-stay residents at high risk for developing pressure ulcers in 47 nursing homes and matched comparison homes in 17 states; Measures: Stage 2 to 4 pressure ulcer incidence among long-stay residents who met the criteria for high risk, identified using an algorithm adapted from the Minimum Data Set 30 Percent of High-Risk Residents with Pressure Ulcers (Long Stay) measure; Results: The overall decline in pressure ulcer rates for treatment relative to matched comparison homes was statistically insignificant (P > 05) A subgroup of heterogeneous homes experienced a statistically significant decline of 324 percentage points (610% relative decrease) in pressure ulcer rates relative to matched comparison homes, but no uniting characteristic common across homes readily explained their success; Conclusions/implications: Scalability of future health information technology-based quality improvement interventions in nursing home settings requires nuanced implementation support, particularly around electronic health record report accessibility and accuracy; Copyright © 2019 AMDA – The Society for Post-Acute and Long-Term Care Medicine Published by Elsevier Inc All rights reserved

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Aim: To study the effectiveness of tailored repositioning and a turning and repositioning system on: (a) nurses' compliance to repositioning frequencies; (b) body posture of patients after repositioning; (c) incidence of pressure ulcers and incontinence-associated dermatitis; (d) nurses' and patients' preferences, comfort and acceptability; and (e) budget impact Background: Patient-tailored systematic repositioning is key in pressure ulcer prevention To date, a clinical decision-making tool is lacking and compliance to pressure ulcer prevention guidelines is low Research concerning commercially available turning and repositioning systems is lacking Design: Multicentre, cluster, three-arm, randomized, controlled pragmatic trial Methods: Two hundred and twenty-seven patients at risk of pressure ulcer development were recruited at 29 wards in 16 hospitals between February 2016 and December 2017 Wards were randomly assigned to two experimental groups and one control group Results: Nurses' compliance to repositioning frequencies increased significantly in the experimental groups when patients were cared for in bed (946% vs 69% and 849% vs 714%) Applying the turning and repositioning system was associated with significantly more correctly positioned patients (30–45° tilted side-lying position) (696% vs 346%) Few pressure ulcers and incontinence-associated dermatitis incidents occurred Both patients and nurses were positive about the intervention Higher labour costs related to repositioning in bed were found in the control group Conclusion: This was the first study investigating the effect of tailored repositioning and the use of a repositioning aid to
Background: Pressure ulcers have a high impact on patients and their families. Profound and up-to-date knowledge among nurses is important given the effect on attitudes and preventative behaviour. To gain insight into educational needs and priorities, regular knowledge assessments are needed. Objective: To gain insight into the knowledge of nurses and nursing assistants about pressure ulcer prevention. Design: Cross-sectional multicentre study. Methods: 474 nurses and nursing assistants recruited at 29 wards in 16 hospitals completed individually the PUKAT 20, a valid and reliable questionnaire to measure nurses knowledge about pressure ulcer prevention. Data were collected between February 2016 and December 2017. Independent sample t-tests, one-way analyses of variance and Kruskal-Wallis tests were performed to analyse the results. Results: The mean total score was 50.7%. The lowest scores were found in the themes knowledge about prevention (42.7%), aetiology (45.6%) and prevention for specific patient groups (46.6%). Higher educational level (H 4043, p < 0.001) and attending additional training about pressure ulcers or wound care in general (t 293, p 0.004) resulted in significant higher total knowledge scores. Conclusion: The results of this study highlight an important knowledge deficit about pressure ulcer prevention. The PUKAT 20 knowledge assessment tool made it possible to differentiate between a variety of cognitive process levels. This allowed to identify knowledge gaps and focus areas for continuing professional education. Curricula for nurses and associated healthcare professionals are to be screened thoroughly and the identified knowledge gaps should be covered. Besides, multifaceted strategies are needed to improve clinical practice. 

Dellaire, F, C Arrigoni, et al (2019) "Development and validation of the pressure ulcer management self-efficacy scale for nurses" Journal Of Clinical Nursing epub ahead of print. Background: Pressure ulcers (PUs) represent a current issue for healthcare delivery. Nurse self-efficacy in managing PUs could predict patients’ outcome, being a proxy assessment of their overall competency to managing PUs. However, a valid and reliable scale of this task-specific self-efficacy has not yet been developed. Objectives: To develop a valid and reliable scale to assess nurses’ self-efficacy in managing PUs, that is, the pressure ulcer management self-efficacy scale for nurses (PUM-SES). Methods: This study had a multi-method and multi-phase design, where study reporting was supported by the STROBE checklist (File S1). Phase 1 referred to the scale development, consisting in the items' generation, mainly based on themes emerged from the literature and discussed within a panel of experts. Phase 2 focused on a three-step validation process: the first step aimed to assess face and content validity of the pool of items previously generated (initial version of the PUM-SES); the second aimed to assess psychometrics properties through exploratory factorial analysis; the third step assessed construct validity through confirmative factorial analysis, while concurrent validity was evaluated describing the relationships between PUM-SES and an established general self-efficacy measurement. Reliability was assessed through the evaluation of stability and internal consistency. Results: PUM-SES showed evidence of face and content validity, adequate construct and concurrent validity, internal consistency and stability. Specifically, PUM-SES had four domains, labelled as follows: assessment, planning, supervision and decision-making. These domains were predicted by the same second-order factor, labelled as PU management self-efficacy. Conclusion: PUM-SES is a 10-item scale to measure nurses’ self-efficacy in PU management. A standardised 0-100 scoring is suggested for computing each domain and the overall scale. PUM-SES might be used in clinical and educational research. Relevance To Clinical Practice: Optimising nurses' self-efficacy in PU management might enhance clinical assessment, determining better outcomes in patients with PUs; © 2019 John Wiley & Sons Ltd.
Introduction: Pressure ulcers (PUs) are associated with substantial health burden. Patients in intensive care units (ICUs) are at high risk for developing PU in the absence of large randomised controlled trials (RCTs) that compare commonly known interventions for preventing PU in ICUs. Uncertainty remains around the best practice strategy for PU management in adult ICUs. This study, therefore, aims to identify the most effective interventions and combinations of interventions that prevent PU in adult ICU using systematic review and network meta-analysis (NMA). Methods and Analysis: We will search for all published and unpublished RCTs evaluating interventions to prevent PU compared with other PU prevention measures or with usual care in adult ICU. The primary outcomes are the incidence of PUs and PU severity in critically ill patients in ICU. The secondary outcomes include number of PUs per patient and intervention-related harms caused by the prevention intervention or intervention-related harms. All data extraction will be performed by at least two independent reviewers on the basis of a priori developed extraction form. We will evaluate the risk of bias of the included RCTs in accordance with the Cochrane Collaboration's risk of bias tool, and assess the quality of evidence using Grading of Recommendations Assessment, Development and Evaluation A standard pairwise meta-analysis and a Bayesian NMA will be conducted to compare the efficacy of different PU prevention interventions. A surface under the cumulative ranking curve will be used to rank the probabilities of each prevention intervention for various outcomes. Ethics and Dissemination: This study will not require the ethics approval as it is a review based on published studies. The findings of this study will be submitted to a peer-reviewed journal for publication. We anticipate that the results of the study will provide the evidence to inform clinicians and guideline developers on determining the best interventions for the prevention of PU in ICU patients. Prospero Registration Number: CRD42018085562; © Author(s) (or their employer(s)) 2019. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions Published by BMJ.
in 6 electronic databases, 409 studies were reviewed, of which 11 studies were analyzed and the data included in a literature review matrix for synthesis Four key findings emerged from the data analysis: effective pressure ulcer prevention programs use a risk assessment, daily reassessment of risk, daily skin inspections, moisture removal strategies, nutritional support and hydration, and offloading pressure; the Braden Scale is effective in detecting pressure ulcer risk in the ICU; an evidence-based bundle is effective in preventing pressure ulcer development; and decreased risk for pressure ulcer development increases patient safety, improves quality of care, and reduces the overall cost of care The findings from this project can result in positive change by providing the evidence to guide improvements in pressure ulcer protocols to increase the quality of care and decrease the incidence of pressure ulcers in the ICU


Objectives: To identify and analyze the scientific evidence regarding the occurrence of Medical Device-Related Pressure Injuries, considering the development sites; and to describe the devices of risk and the measures of prevention and treatment; Method: Integrative, search-based review: CINAHL, PubMed, Wiley InterScience, Scopus, and Web Of Science The terms "pressure ulcer" and "medical devices" were used, including original articles and case studies published between 2010 and 2015 Nine studies were selected; Results: Posterior cervical region and nose had the highest injury frequencies, respectively, 660% and 400% Eleven risk devices were identified, with emphasis on Non-Invasive Ventilation masks and orotracheal tube For prevention and treatment emerged recommendations specific to the device employed and general measures; Conclusion: Medical Device-Related Pressure Injuries are frequent problems, however, they can be prevented and treated based on the recommendations of the articles raised in this review;


Background: CPAP is used as a method to support ventilation and oxygenation in pre-term infants In addition to having an immature respiratory system, pre-term infants also have very immature and fragile skin The interfaces most commonly used with CPAP devices are known to cause pressure injuries in this patient population The aim of this quality improvement project was to develop a multidisciplinary team to reduce the incidence of device related hospital-acquired pressure injuries (HOPI) in the NICE due to QI of 2014 presenting with an increased Stage II rate Methods: A multidisciplinary team formed and evaluated risk factors for pressure injuries A key driver diagram (see Figure 1) was created with the following primary drivers: 1 Skin integrity by providing education to identify pressure injury, applying skin protectant, and introducing an RT/RN coordinated skin assessments 2 Evaluation of interface by alternating the interfaces of mask and prongs, adopting Bubble CPAP (BCPAP), encouraged a decreased usage of mask (due to fixation limitations), changing interfaces only as needed due to skin protectant 3 Developed the team by creating a core RT/RN group, encouraged collaboration with wound service, and provided re-education on the usage of BCPAP and skin protectant 4 Event review, communication, and awareness by implementing reporting process for skin concerns, reviewed events at multidisciplinary meetings, and displayed 'I'm bubbling' sign outside of patient's room The outcome measure is the rate of HAPI per NICU patient census Plan-Do-Study-Act (PDSA) cycles to test and learn from change were utilized After the first PDSA cycle was complete HAPIs were continued to be noted Upon completion on the second PDSA cycle HAPIs were eliminated; therefore, the team maintained the current assessment and patient care routine Results: Quarter 3 of 2014 had an increase in device related HAPI in the NICU with a rate of 612 All subsequent quarters have maintained a HAPI rate of zero It was noted that with over 3,100 BCPAP days per year, there was no increase in HAPI Conclusions: Based on the above mentioned interventions our team has eliminated device related HAPI We continue to monitor skin integrity with RT and RN simultaneously; assessing includes in and around nares, behind and in ears, and entire head We continue to review literature and develop a best practice guideline for the utilization of BCPAP in premature infants

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Background: Between October 2017 and March 2018, the Trust experienced significant winter pressures and an increase in category 2 and 3 hospital-acquired avoidable pressure ulcers This review aimed to investigate the causal factors of this increase Methods: A 'Deep Dive' review of 37 cases was undertaken in three stages: (i) assessment and intervention to prevent a chain of detrimental factors might be key to reduce and prevent hospital-acquired avoidable pressure ulcers Recommendations for immediate action, education and future research have been made to the Trust Quality and Safety Committee;
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Objective: Ultrasonography is suitable for assessing pressure ulcers, and several features of ultrasonographic images that indicate abnormalities have been reported However, no study has compared ultrasonographic images between normal and pressure-loaded skin and subcutaneous tissue from the same patients This study aimed to assess lateral thoracic tissue using ultrasonography for both pre- and postoperative conditions and investigate changes in the tissue caused by loading Surgeries were performed with patients in the park-bench position; Method: A nursing researcher obtained ultrasonographic images of the skin and subcutaneous tissue of the lower thoracic region in areas in contact with the surgical table one or two days before and after surgery This study focused on three groups of two patients who had a category I pressure ulcer (PU), blanchable erythema, or normal skin on their lateral thoracic region; Results: A total of six patients participated Postoperatively, muscle layers became thinner and less clear compared with preoperative conditions in patients with the Category I pressure ulcers These patients complained of significant pain in the areas of their pressure ulcers; Conclusion: Thickness of muscle layers could be an early sign of deep tissue injury;
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Background: Pressure injuries (PIs) represent a significant burden on the healthcare system and have a negative impact on the quality of life of those affected by these wounds Despite best practice guidelines and other protocols to help healthcare facilities prevent PIs, the prevalence of PIs in Canada across all healthcare settings is concerning; Objective: To describe the pattern of PI prevention and identify national priorities and opportunities to address PIs; Methods: A descriptive, cross-sectional, online survey was created between August and December 2017 to explore Canadian healthcare professionals’ knowledge, attitudes, and practices related to PIs; Results: In total, 590 surveys were completed Eighty-five percent of respondents confirmed that PIs occur in their work environments, and 29% claimed PIs are a frequent occurrence Most of the respondents (91%) confirmed that they were part of a team that treats PIs Of the 590 participants, 90% confirmed that they are aware of PI prevention devices and technologies Between 80% and 90% attest to using offloading devices including prophylactic dressings to prevent PIs, but only 20% instituted measures to address moisture-associated skin damage; Conclusions: The findings from this survey have highlighted a disconnect between Canadian healthcare professionals' awareness of PIs and the implementation of best practices for PI prevention It is evident that, although the majority of respondents were aware of PIs and related treatment protocols, barriers still exist that impede optimized care and treatment;
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Page 7 of 16

Introduction: Chronic wounds are physically debilitating and painful and are responsible for the addition of more than $25 billion annually in health care costs in the United States Extracellular matrix (ECM) replacements have been demonstrated to aid in wound healing by providing an optimal environment to facilitate the healing process; Objective: This study examines the healing rates of stage 4 pressure ulcers using combination of a commercially available porcine-based wound matrix dressing alongside negative pressure wound therapy (NPWT) versus using NPWT alone; Materials and Methods: Patients were randomized to receive either the matrix plus NPWT (study) or NPWT alone (control) for stage 4 sacral pressure ulcer treatment Wounds were photographed and measured weekly The experimental group had their ECM dressings changed every other week and their NPWT changed twice weekly; Results: A total of 16 patients, 8 study and 8 control, completed this study After the 12-week study period, the average control patient healing rate was 4579% as compared with the 8998% healing rate in the study group The difference in healing rate between control and study patients was optimal by 12 weeks; Conclusions: These studies suggest that ECM dressings may be a promising adjunctive treatment option for stage 4 pressure ulcers;

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Background: Detecting pressure ulcer is an important nursing diagnostic and care requirement in patients hospitalized in Intensive Care Unit (ICU) The purpose of this study is to examine the effect of Lawsonia plant on pressure ulcer grade one in ICU patients; Methods: In this clinical trial, 72 patients eligible for hospitalization in hospitals of Isfahan University of Medical Sciences were divided randomly into two control and intervention groups The standard program of skin care was implemented on both groups; in addition, a mixture of Lawsonia (henna) and distilled water was applied topically in the intervention group The classification form of the International Pressure Ulcer Advisory Panel was used to identify grade one ulcers Data were collected on the 1st day through demographic information questionnaire and Braden pressure ulcer risk assessment scale An infrared thermometer was used to record local temperature of the ulcers on a daily basis Assessments were made based on Pressure Ulcer Scale for Healing (PUSH), and the pressure ulcer area was examined per square centimeter on the 1st, 4th, and 7th days The data were analyzed using SPSS 16; Results: The average change in the ulcer area per square centimeter in the control group increased by 299 ± 3793 whereas it decreased by 354 ± 3391 in the intervention group The mean PUSH score decreased in the intervention group (536 ± 312) while it increased in the control group (191 ± 153) The average changes of PUSH score before and after the intervention showed a significant difference in both groups; Conclusions: With regard to the effect of henna on the reduction of ulcer area and the average PUSH score in ICU patients, the application of henna is recommended for healing grade one pressure ulcers;

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Objective: To investigate the roles of hemodynamic factors and oxygenation on the incidence of pressure ulcers in patients in the ICU on mechanical ventilation; Methods: This prospective analytical cross-sectional study was performed in several ICUs for a period of 8 months in Iran Researchers checked patients for pressure ulcers on a daily basis They collected demographic, hemodynamic, and oxygenation data until a pressure ulcer occurred, the patient's artificial airway was removed, the patient died, or the patient was discharged; Results: From August 2017 to February 2018, a total of 2,581 patients were admitted to the study ICUs; of these, 133 patients were eligible for the study The results indicated that 414% (n 55) of the patients ended up with pressure ulcers Investigation of the variables using a Cox regression model showed that, among other variables considered in this study, age, mean arterial pressure, and positive end-expiratory pressure in the mechanical ventilator can contribute to the risk of pressure ulcers; Conclusions: Providers should pay attention to changes in hemodynamic parameters, especially mean arterial pressure; carefully determine the most appropriate positive end-expiratory pressure for patients connected to mechanical
ventilation; and take special care of susceptible groups such as older adults and hospitalized patients to decrease the incidence of pressure ulcers;

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Squitieri, L, D A Waxman, et al (2018) "Evaluation of the Present-on-Admission Indicator among Hospitalized Fee-for-Service Medicare Patients with a Pressure Ulcer Diagnosis: Coding Patterns and Impact on Hospital-Acquired Pressure Ulcer Rates" Health Services Research 53: 2970-2987

Objectives: To evaluate national present-on-admission (POA) reporting for hospital-acquired pressure ulcers (HAPUs) and examine the impact of quality measure exclusion criteria on HAPU ratesData Sources/study Setting: Medicare inpatient, outpatient, and nursing facility data as well as independent provider claims (2010-2011)Study Design: Retrospective cross-sectional studyData Collection/extraction Methods: We evaluated acute inpatient hospital admissions among Medicare fee-for-service (FFS) beneficiaries in 2011 Admissions were categorized as follows: (1) no pressure ulcer diagnosis, (2) new pressure ulcer diagnosis, and (3) previously documented pressure ulcer diagnosis HAPU rates were calculated by varying patient exclusion criteriaPrincipal Findings: Among admissions with a pressure ulcer diagnosis, we observed a large discrepancy in the proportion of admissions with a HAPU based on hospital-reported POA data (52 percent) and the proportion with a new pressure ulcer diagnosis based on patient history in billing claims (497 percent) Applying quality measure exclusion criteria resulted in removal of 912 percent of admissions with a pressure injury diagnosis from HAPU rate calculationsConclusions: As payers and health care organizations expand the use of quality measures, it is important to consider how the measures are implemented, coding revisions to improve measure validity, and the impact of patient exclusion criteria on provider performance evaluation

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Objective Patients in the intensive care unit (ICU) have increased risk of pressure injury (PI) development due to critical illness This study compared two silicone dressings used in the Australian ICU setting for sacral PI prevention Design A cluster-controlled clinical trial of two sacral dressings with four alternating periods of three months duration Setting A 10-bed general adult ICU in outer-metropolitan Brisbane, Queensland, Australia Participants Adult participants who did not have a sacral PI present on ICU admission and were able to have a dressing applied for more than 24 hours without repeated dislodgement or soiling in a 24-hour period (>3 times) Interventions Dressing 1 (Allevyn Gentle Border Sacrum™, Smith & Nephew) and Dressing 2 (Mepilex Border Sacrum™, Mölnlycke) Main outcomes measures The primary outcome was the incidence of a new sacral PI (stage 1 or greater) per 100 dressing days in the ICU Secondary outcomes were the mean number of dressings per patient, the cost difference of dressings to prevent a sacral PI and product integrity Results There was no difference in the incidence of a new sacral PI (044 per 100 dressing days for both products, p = 100), the mean number of dressings per patient per day (050 for both products, p = 051) and product integrity (85% for Dressing 1 and 84% for Dressing 2, p = 069) There was a dressing cost difference per patient (A$1029 for Dressing 1 and A$2884 for Dressing 2, p < 0001) Conclusions Similar efficacy, product use and product integrity, but differential cost, were observed for two prophylactic silicone dressings in the prevention of PIs in the intensive care patient We recommend the use of sacral prophylactic dressings for at-risk patients, with the choice of product based on ease of application, clinician preference and overall cost-effectiveness of the dressing

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Objective: This article compares the results from a recent pressure ulcer (PU) prevalence audit at the Sheikh Khalifa Medical City (SKMC) hospital in Abu Dhabi to identify the impact of new prevention initiatives introduced around 2013 and establish the effectiveness of PU prevention strategies, judged quality of nursing care, and costs associated with patients developing a hospital-acquired pressure ulcer (HAPU); Method: The methods used were based on a previous point prevalence study involving 441 acute care patients, who were assessed using the International Pressure Ulcer Prevalence (IPUP) Survey Following pre-selection of a 24-hour period for data capture, hospital staff collected PU data Hill-Rom provided

A paucity of research exists on medical student pressure ulcer education; Purpose: This study examines medical student competency outcomes following implementation of a competency-based curriculum that included a pressure ulcer component in its educational intervention; Methods: Over a 5-year period, 645 medical students completed the curriculum, which included a preceptor-led didactic session, online study resources, clinical experiences, and a brief online competency assessment The assessment involved knowledge of risk factors, wound staging/classification, and prevention and management strategies and included short answer and extended matching questions A performance standard was set; students not achieving this standard underwent remediation and reassessment The curriculum was implemented in 3 phases with quality improvement (QI) between each phase The average competency assessment score and passing rates were determined for each phase Mean scores for each phase were compared using an analysis of variance test; Results: Mean competency assessment scores increased significantly after each QI from 175 (range 11-23) to 183 (range 12-24) to 198 (range 12-25) in phases 1, 2 and 3, respectively [F(2,642) 59502, P <.001]; the performance standard was raised after both QI points Overall, 87% of
students underwent remediation and reassessment, but all achieved the performance standard on their second attempt: Conclusion: Through a thoughtful QI process that involved carefully aligning all curricular elements (the instructional activities and the assessment), a focused and accountable curriculum was developed that ensured all medical students in the program would achieve a basic level of competency. Increasingly, accreditation agencies are asking medical schools to move toward competency-based curricula. This curriculum represents an important step in this direction.


BACKGROUND Prevalence and associated risk factors for pressure ulcers (PU) vary in different body areas and diseases. Few studies have focused on PU in patients with enterocutaneous fistula (ECF). The aim of the present study was to investigate the prevalence and risk factors for PU in patients with ECF. MATERIAL AND METHODS From January 2016 to June 2016, medical records of 140 patients with ECF who were transferred to the Enterocutaneous Fistula Treatment Center, Jinling Hospital, were reviewed and analyzed. The prevalence of PU was investigated. To evaluate the risk factors for PU in patients with ECF, 5 patients with PU before admission were excluded, and the remaining 135 patients were divided into 2 groups: the PU group and the non-PU group. The risk factors for PU were confirmed by multivariate logistic regression analysis of characteristics on admission. RESULTS There were 42 cases with PU (5 cases with PU before admission, 37 cases with PU in the treatment after admission), and the prevalence of PU in patients with ECF was 30%. In addition, Braden risk score <19 (OR 9.33, CI: 2.80-31.08, p<0.001); underweight (BMI<18.5) (OR 5.21, CI: 1.65-16.39, p=0.005); onset of duodenal fistula (OR 4.86, CI: 1.33-17.78, p=0.017); diabetes (OR 4.95, CI: 1.03-23.85, p=0.046); and APACHE II score (OR 1.34, CI: 1.04-1.72, p=0.019) were associated with PU. CONCLUSIONS The PU prevalence was 30% in patients with ECF. Braden risk score <19, underweight, onset of duodenal fistula, diabetes, and APACHE II score were risk factors for PU in patients with ECF.


Frequent repositioning is important to prevent pressure ulcer (PU) development, by relieving pressure and recovering damages on skin areas induced by repetitive loading. Although repositioning is the gold standard to prevent PU, there is currently no strategy for determining tissue condition under preventive approaches. In this study, the peak reactive hyperemia (RH) trends and ultrasonographic (US) features are compared with the tissue condition under histopathological examination to determine the potential use of these features in determining the tissue condition noninvasively. Twenty-one male Sprague–Dawley rats (seven per group), with body weight of 385–485 g, were categorized into three groups and subjected to different recovery times, each with three repetitive loading cycles at skin tissues above of right trochanter area. The first, second, and third groups were subjected to short (3 minutes), moderate (10 minutes), and prolonged (40 minutes) recovery, respectively, while applying fixed loading time and pressure (10 minutes and 50 mmHg, respectively), to provide different degree of recovery and tissue conditions (tissue damage and tissue recovery). Peak RH was measured in the three cycles to determine RH trend (increasing, decreasing, and inconsistent). All rat tissues were evaluated using ultrasound at pre- and post-experiment and rated by two raters to categorize the severity of tissue changes (no, mild, moderate, and severe). The tissue condition was also evaluated using histopathological examination to distinguish between normal and abnormal tissues. Most of the samples with increasing RH trend is related to abnormal tissue (71%); while inconsistent RH trends is more related to normal tissue (82%). There is no relationship between the tissue conditions evaluated under ultrasonographic and histopathological examination. Peak RH trend over repetitive loading may serve as a new feature for determining the tissue condition that leading to pressure ulcer.
Objective: To verify the feasibility of treating pressure ulcers (PUs) with autologous platelet rich fibrin (PRF) bioactive membrane, both in vitro and in vivo; Method: An animal model using adult male Sprague-Dawley rats was used. Pressure was periodically exerted on the skin to induce localised ischaemia by using an external magnet and transplanted metal disc. After a PU developed, the rats were divided into two groups: a treatment group and a control group. Rats in the treatment group were then treated with PRF bioactive membrane every three days; Results: A total of 20 rats were used in this study. At days three and seven, the PU area in the PRF bioactive membrane-treated group was significantly smaller than that in the control group. Further study of this algorithm in other ICUs and among various care populations is recommended to fully establish its efficacy;

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Aim: Medical Device-Related Pressure Ulcers are skin breakdowns related to certain medical devices that increase morbidity, lengthen hospital stays, and increase the cost of treatment. Approximately one third of reported pressure ulcers are associated with medical devices. The aim of this study is to examine the impact of a suggested nursing intervention protocol on the occurrence of medical device-related pressure ulcers in critically ill patients. Design: A prospective, quasi-experimental research design was used in this study. Methods: 100 patients participated in our study, divided into study and control groups. The researchers selected Endo-tracheal and Nasogastric tubes to examine their association with the development of pressure ulcers. The researchers observed the prevalence of pressure ulcers caused by the selected devices through daily clinical observation. Patients receiving routine care were used as a control group, while the suggested nursing intervention protocol was implemented to the study group of patients. The results of the given protocol on the study subjects were compared to the collected base line data for the control group. Results: The study revealed a highly statistically and clinically significant difference between the study and control groups in relation to incidence of endo-tracheal and nasogastric tube pressure ulcers.
The results indicate that the incidence of endo-tracheal tube pressure ulcers decreased from 90% to 321% after implementation of the suggested nursing intervention protocol (p 0.031), whereas the incidence of nasogastric tubes pressure ulcers fell from 778% to 131% (p 0.012) Conclusion: the examined evidence based suggested nursing intervention protocol proved highly effective in reducing the occurrence of selected Medical Device-Related Pressure Ulcers in critically ill patients.

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Websites


National Guideline Clearinghouse – predefined search https://search.ahrq.gov/search?q=%22pressure+ulcer*%22+or+%22pressure+injur*%22


Cochrane Wounds Group https://wounds.cochrane.org/news/reviews
The Cochrane Wounds Group was established in 1995 with the aim of using evidence from trials to conduct systematic reviews to establish the effectiveness of interventions for the prevention and treatment of wounds, and interventions for the prevention and treatment of wound complications.

National Pressure Ulcer Advisory Panel http://www.npuap.org/
e-Journals

Advances in Skin & Wound Care (Tables of Contents only)

Eplasty (formerly Journal of Burns & Wounds) (full text)

EWMA Journal (full text)

International Wound Journal (Tables of Contents only)

Journal of the American College of Clinical Wound Specialists (full text)

Journal of Tissue Viability (full text)

Journal of Wound Care (full text)

World Council of Enterostomal Therapists Journal (full text 2010 onwards)

World Wide Wounds: the premier online resource for dressing materials and practical wound management information (full text)

The mission of World Wide Wounds is to be the premier online resource for peer-reviewed information on dressing materials providing practical guidance on all aspects of wound management to health professionals worldwide.

Wound Care Advisor (full text 2014 onwards)

Wound Management and Prevention (Table of Contents only)

Wound Practice & Research (full text)

Wound Repair & Regeneration (full text with 12-month delay)

Wounds International (full text 2012 onwards)

Wounds UK Journal (full text 2011 onwards)

e-Books

Acute and chronic wounds 5th ed, 2016

Fast facts for wound care nursing: practical wound management in a nutshell 2011

Nutrition and wound healing 2007


Queensland Health Libraries and Contact Numbers

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<th>Contact Information</th>
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<tr>
<td>Cairns Hospital Library &amp; Knowledge Centre</td>
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