

[EP377] EXPLORING RISK FACTORS ASSOCIATED WITH THE DEVELOPMENT OF NOSOCOMIAL PRESSURE ULCERS IN JORDAN

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Thursday, May 14, 2015

E-poster session: Pressure Ulcer 1

Aim: The study explores risk factors associated with the development of hospital-acquired pressure ulcers.

Method: A cross-sectional multicentre study was conducted. All patients matching the study selection criteria were recruited conveniently from three hospitals in Jordan. Descriptive and univariate analysis was performed on different study variables. Multivariate analysis using a special algorithm ("purposeful selection macro") was employed to explore the independent association between a number of risk factors and pressure ulcers.

Results / Discussion: Results from multivariate analysis showed that: moisture, decreased mobility, presence of three chronic diseases or more and hypoalbuminemia were independently associated with the development of pressure ulcers when the effect of all other variables in the study was statistically controlled for using logistic regression.

Conclusion: This study is the first of its kind that was conducted in Jordan. Results from current work support the previous evidence from literature for some risk factors to be associated with pressure ulcers. However, the current work also found pressure ulcers to be associated with a younger age (the age cohort above 40 years) than has previously been reported.

[EP378] IDENTIFYING REGISTERED NURSES' ATTITUDES AND PERCEIVED FACILITATORS AND BARRIERS TOWARDS PRESSURE ULCER PREVENTION STRATEGIES IN THE INTENSIVE CARE UNIT

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E-poster session: Pressure Ulcer 1

Aim: The aim of this study was to examine registered nurses' (RNs) attitudes to pressure ulcer (PU) prevention strategies and their perception of barriers and facilitators which may impact adoption and implementation of PU prevention evidence in the intensive care setting (ICU).

Method: This study used a descriptive cross-sectional survey design. The survey was distributed to RNs working in ICU of a major metropolitan hospital in Saudi Arabia. Data were analysed with descriptive-correlation statistics, and multiple regression analysis. Thematic analysis was undertaken for qualitative data.

Results: Of a total of 60 ICU nurses, 56 nurses participated in this study. Participants demonstrated positive attitudes to PU prevention ($\mu=38.19/52$, 73.44%). No significant differences were found between the demographic characteristics of the participants with the RNs attitude subscale, and perceived barriers and facilitators towards PU prevention in ICU. Two barriers influenced the ability of RNs to implement PU prevention strategies including: time demands ($\beta=0.388$, $p=0.011$); and limitation of RNs knowledge ($\beta=-0.632$, $p=0.022$). Statistically significant facilitating factors which increased RNs ability to undertake PU prevention were: ease of obtaining pressure reduction surfaces ($\beta=-0.388$, $p=0.007$); collaboration with interdisciplinary teams (nursing/medicine/etc.) ($\beta=0.37$, $p=0.02$); and availability of appropriate skin care products ($\beta=0.44$, $p=0.015$). Thematic analysis of open ended questions highlighted the impact of workload and education as barriers that impede implementation of high quality care towards PU prevention.

Conclusion: The results provide critical evidence that can be utilised to guide strategies for improving the effectiveness of PU evidence implementation in ICU such as increasing RNs' awareness, training, and the importance of prioritising PU prevention in their daily care.

[EP379] REDUCING THE INCIDENCE OF HOSPITAL ACQUIRED PRESSURE ULCERS

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E-poster session: Pressure Ulcer 1

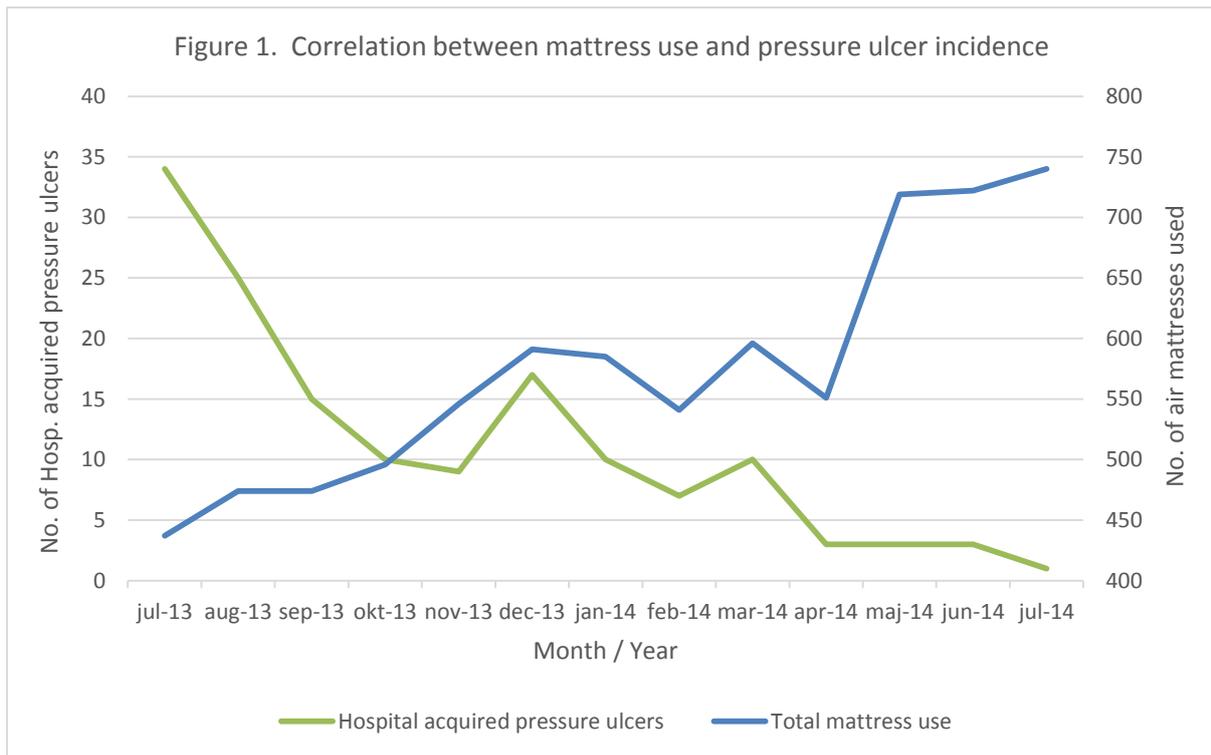
Aim: This project aimed to reduce hospital acquired pressure ulcer incidence by implementing a comprehensive care-bundle into clinical practice. One element of this care-bundle was providing appropriate support surfaces to patients admitted into hospital.

Method: A Rapid Spread methodology identified several changes to practice that could improve the patient experience and reduce pressure ulcer incidence.

Internal auditing highlighted an opportunity to reduce the time taken to get dynamic mattresses under patients admitted to hospital and identified as being at high risk of pressure ulceration. The prolonged application of pressure on vulnerable tissue is a significant risk factor in pressure ulcer development therefore expediting mattress provision offers important patient benefits.

Implementing a modified Braden pressure ulcer risk assessment tool resulted in an increased percentage of inpatients being classified as high risk of pressure ulceration. The hospital pressure ulcer prevention pathways devised and implemented by the tissue viability team guided nurses to allocate a dynamic mattress as early as possible after admission i.e. in the Emergency Department.

Results / Discussion: As illustrated by Figure 1 the data demonstrates that as use of dynamic mattresses has increased there has been a reduction in pressure ulcer incidence.



Conclusion: Effective pressure ulcer prevention requires a holistic approach to patient care. When combined with other elements of a care-bundle such as regular skin checks, effective continence and nutrition management and patient repositioning, the timely provision of appropriate support surfaces can play an important role in helping to reduce pressure ulcer incidence and harm events.

[EP380] ADOPTING A NEW MATTRESS REPLACEMENT SYSTEM AS PART OF A COMPREHENSIVE CARE BUNDLE AIMED AT REDUCING PRESSURE ULCER INCIDENCE ACROSS THE TRUST

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E-poster session: Pressure Ulcer 1

Aim: To identify, evaluate and adopt a new mattress replacement system as part of a comprehensive care bundle aimed at improving patient safety, patient experience, clinical outcomes and the staff experience.

Method: The tissue viability team implemented a specialist care-bundle across both hospital sites (totalling 1550 beds and 3,300 clinical staff). The SSKIN care-bundle consisted of;

- Surface selection
- Skin inspection
- Keep moving
- Incontinence
- Nutrition

To identify the most appropriate support surface a formal tender process was initiated and involved a multidisciplinary trust team led by Tissue Viability with support from the Chief Nurse.

Support surface evaluation took place across both surgical and medical clinical areas. Tissue viability link nurses led the evaluation at ward level which included clinical staff, moving and handling and infection prevention and control.

Tender submissions were scored and ranked by procurement. Clinical product evaluations were assessed by tissue viability, medical equipment library and the Chief Nurse.

Results / Discussion: Since SSKIN care-bundle implementation, hospital acquired pressure ulcer incidence (defined as Category/Stage 2,3,4 or un-stageable) has reduced by over 65% (from 100 to 34 per month).

Staff feedback on the new mattress system identified the following benefits over existing support surfaces;

- improved patient comfort
- ease of use (less user input required for correct system set-up)
- Improved staff concordance with allocation and use of dynamic mattresses
- easy to decontaminate, service and maintain.

Conclusion: When used appropriately as part of a comprehensive pressure ulcer care bundle the correct support surface can play an important role in helping to reduce trust wide pressure ulcer incidence.

[EP381] THE USE OF BRADEN SCALE IN CHINA'S MAINLAND: WHAT WE HAVE LEARNT IN 15 YEARS?

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Thursday, May 14, 2015

E-poster session: Pressure Ulcer 1

Aim: To explore the application of Braden scale in China's mainland through literature analysis.

Method: Search "Braden scale" and "pressure ulcer risk" in the most common used database China Biology Medicine database (CBM) and China Academic Journal Network Publishing Database (CAJD) to collect articles thus to analyze these literature by bibliometrics methods.

Results / Discussion: Since the Braden Scale published in 1987, it had been widely used in the world. Chinese first article about the use of Braden Scale was published in 1999. After more than ten years, the Braden Scale becomes the most usual used pressure ulcer risk assessment scale in Chinese hospitals and related researches were increasing year by year. But there are still many problems in standardized application, such as improper application range (use Braden scale in device-related Pressure ulcer), validity and reliability of the translated version were often not reported, use the risk level of Braden Scale as diagnostic standard of unavoidable pressure ulcer, etc.

Conclusion: Though it's widely used in Chinese mainland, Braden scale still has many problems in application which needs to be resolved. The inappropriate implementation and misreading in the clinical practice have caused negative influences. The need to standardize the unified translation version and clarification to the content is urgent. At the same time, the normativity of research reports should be improved.

[EP382] EFFECTIVENESS OF TOPICAL THERAPIES BASED ON KERATIN FOR PRESSURE SORE IN SPINAL CORD INJURY

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Thursday, May 14, 2015

E-poster session: Pressure Ulcer 1

Aim: The aim of our preliminary study is to analyse the evolution of chronic, non-healing Pressure Ulcers (grade II – III) on patients with spinal cord injuries when treated with a keratin based gel and an absorbable matrix rich in keratin protein.

Method: Ten inpatients with chronic, non-healing PU's at the National Spinal Injury Centre (NSIC), Stoke Mandeville, UK were treated with the keratin products and evolution was tracked before and after treatment. Fifteen patients at Burwood Spinal Unit (BSU), Burwood Hospital, Christchurch were treated with the keratin gel at all stages of the healing process.

Results / Discussion: At NSIC, in 2 patients there was a complete healing of the lesion, in 6 patients we found a reduction in the size of PU with the progress of the healing process, 2 patients didn't show any improvement. Using Standard Care, the expectation was that healing would have been slower and a lower proportion would have healed. At BSU, in the majority of the patients and particularly at the latter stages of healing, the gel actively helped healing and reduced the incidence of breakdown once patients became mobile. Using Standard Care, the expectation was that healing would have been slower and the incidence of breakdown would have been higher.

Conclusion: The conservative management of PU through keratin protein-based products could reduce operating costs by reducing the healing time of patients with spinal cord injury and by reducing re-breakdown once the patients become mobile again.

[EP383] EVALUATION OF ROOT CAUSE ANALYSIS FRAMEWORKS FOR THE INVESTIGATION OF COMMUNITY-ACQUIRED PRESSURE ULCERS

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E-poster session: Pressure Ulcer 1

Aim: The aim of this poster presentation is to describe a study that sought to evaluate the suitability of root cause analysis (RCA) frameworks for the investigation of community-acquired pressure ulcers. The objective was to identify the extent to which these frameworks take account of the setting where the ulcer originated as being the person's home rather than a hospital setting.

Method: The first phase was a systematic review of the international literature. The second phase was a documentary analysis of a sample of frameworks used by home nursing services in England to investigate community-acquired pressure ulcers.

Results / Discussion: No published papers (1994 – July 2013) were identified for inclusion. Fifteen investigative frameworks were collected and analysed between July and August 2013. Twelve of the retrieved frameworks were intended for the investigation of community-acquired pressure ulcers; however, only seven took account of the settings where the ulcer originated as being the patient's home.

Conclusion: The findings suggest that many frameworks used to investigate community-acquired pressure ulcers do not take account of the setting where the ulcer originated as being the person's home rather than a hospital setting. The authors believe that the causal or contributory factors underlying community-acquired pressure ulcers will only be detected if the frameworks underpinning their investigation recognise and include the unique dimensions of risk in home healthcare settings. This study provides evidence of the need to develop appropriate home nursing RCA frameworks.

[EP384] PROGRAM OF CONTINUOUS QUALITY IMPROVEMENT FOR PREVENTION AND TREATMENT OF PRESSURE ULCERS IN VILA FRANCA DO CAMPO

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Thursday, May 14, 2015

E-poster session: Pressure Ulcer 1

Aim: Pressure ulcers (PU) are a public health issue and its prevention is the most effective way to maintain the life quality of the individuals whom are at risk of developing them, avoiding in this matter the increase of health care costs. This continual improvement program of prevention and treatment of pressure ulcers was developed by Vila Franca do Campo Health Center, whose population is patients with high risk of developing them and are followed by home care nursing.

Method: This study included sixty patients; was based on the Heather Palmer check-list and evaluated by process and results indicators between January 2013-January 2014.

Results / Discussion: It has been found that the diagnostic efficiency rate of the risk of developing PU was calculated at 33.33%, the highest incidence is in the III category with 26.67%, and the lowest at category I, 11.67%. The prevalence rate in categories III and IV was 35%. The cure rate was more expressive in category I, 90% and the lowest in category IV, 23.68%. The treatment of PU in category IV had an annual cost of 7730.19€, against 70.44€ in category I. Concerning informal caregivers, 80% of them had gain preventive skills

Conclusion: Concerning informal caregivers, 80% of them had gain preventive skills. In terms of best practices, the program allowed the knowledge of the population epidemiologic aspects, the promotion of informal caregivers empowerment, the standardization of health care practices and the implementation of continual improvement strategies.

[EP385] ARE PRESSURE ULCERS THE MAIN REASON FOR ADMISSION TO A LONG TERM CARE UNIT? REVIEW 2014

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Thursday, May 14, 2015

E-poster session: Pressure Ulcer 1

Aim: To know the importance that Pressure Ulcers (PU) have to formalize the application entrance in a Long Term Care Unit (LTCU), with respect to degree of dependency in the Activities in Daily Life (ADL), and cognitive impairment (CI).

Method: Retrospective Analysis of 627 cases, through study of the corresponding applications entrance in a LTCU (2005-2014).

Results / Discussion:

- Patients: 627 Men 44% Women 56%
- With PU: 28.5%. 1 PU: 12,1%; 2 PU: 8,1%; >2 PU: 6,8%. 1,5% the concrete number is not displayed
- Severity of wounds: Categories I and II: 15,5%; Categories III and IV: 12%; PU whose category is not displayed 1%
- Degree of dependency in the ADL: Total: 76%; Severe: 15,7%; Moderate: 5,3%; Slight: 2,9%; Independent: 0,1%
- CI: Severe: 63,9%; Moderate: 16,1%; Slight: 8,4%; Without CI: 11,6%

Conclusion: The number of patients with PU is high (28,5%), but we believe that this fact alone is not determinative to apply for admission in a LTCU. Versus 14,9% patients who have two or more PU, and 12% with lesions of category III and IV (data indicating a greater need for care), we see that 91,7% of patients, have total or severe dependence in ADL. 80% have a moderate or severe CI. This leads us to conclude that the complexity of dealing with this kind of patients and their high dependency care, determines the application of institutionalization.

[EP386] IMPROVED PATIENT EXPERIENCE AND OUTCOMES USING THE DYNAFORM MERCURY ADVANCE MATTRESS

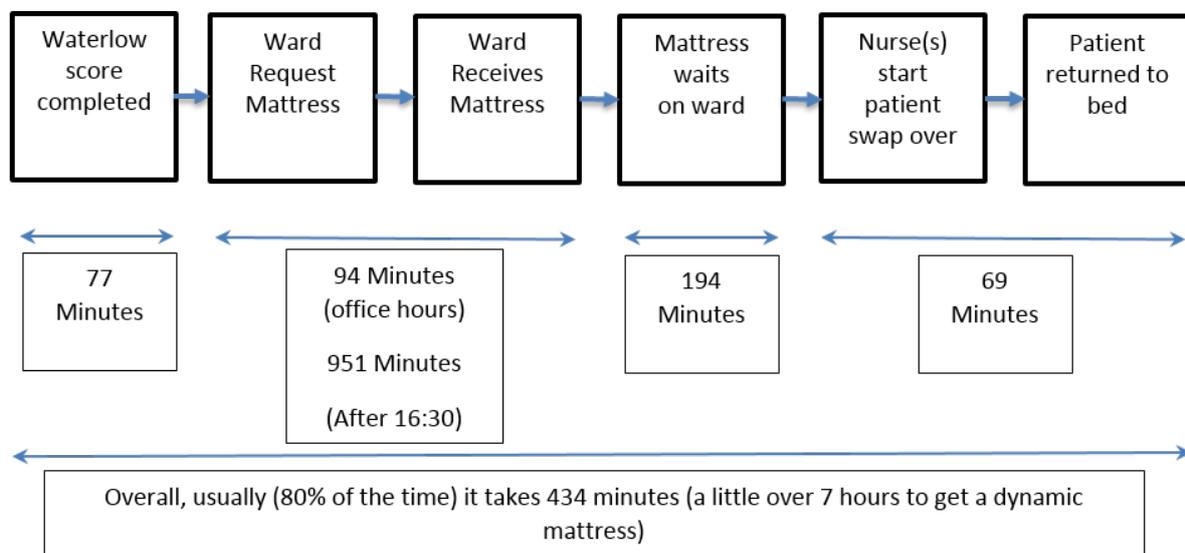
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Thursday, May 14, 2015

E-poster session: Pressure Ulcer 1

Aim: This study investigates patient outcomes when using hybrid mattresses on six wards in The Royal Wolverhampton NHS Trust. All patients were nursed on a mattress* and monitored for a six-month period. Previously statistical process control (SPC) had been used to demonstrate robustly how patients could wait over 6 hours before being transferred onto a dynamic mattress despite the mattress being delivered within the recommended 4 hour standard. This paper has concentrated on demonstrating improved patient outcomes by eliminating patient transfers and having the ability to 'step up' patients who are deemed clinically to need a Dynamic surface immediately.



Method: The Royal Wolverhampton NHS Trust equipped six entire wards with the mattress*. The mattress is a "Very High Risk" dynamic replacement system, combined with the benefits of modern foam technology.

Results / Discussion: There was a 39% reduction in pressure ulcer incidence on the six trial wards. Patients and nurses reported improved patient experience.

Conclusion: This case study clearly identifies opportunities to improve safety and patient

experience, by taking advantage of new technological advances in mattress design and thus reducing the cost associated with treating pressure ulcers and also reducing the length of patient stays.

*Dyna-form Mercury Advance mattress

[EP387] HOW TO ACHIEVE NO AVOIDABLE PRESSURE ULCERS FOR 600+ IN A COMMUNITY SETTING

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Thursday, May 14, 2015

E-poster session: Pressure Ulcer 1

Aim: To discuss the key elements for achieving no avoidable pressure ulcers in a community setting.

Method: The Royal Wolverhampton NHS Trust embraced the stop the pressure campaign in 2012. The Trust is a combined Trust therefore any patient that develops a pressure at home is known in the community or if they have been admitted to hospital. The Community deals with very complex health and social situations, often in very socially deprived areas. The Trust introduced the following:

- Invested in a Tissue viability team to support training and education
- Pressure ulcer prevention training is mandatory
- The TV team allocated a nurse in the emergency portals to improved patient experience once the patient has been admitted and to aid communication with the community services
- Introduction of Chief nurse led accountability meeting, scrutinising the serious incident investigations
- Scrutiny of grade 2 incidents
- Leadership driven changes to drive quality care
- Patient engagement

Results / Discussion: Adult community services have not only reduced the number of patients experiencing pressure ulcers but also achieved 600+ days without an avoidable serious incident. On average the pressure ulcers reported are generally very small.

Conclusion: The raised awareness of accountable actions required to prevent pressure ulcers has radically improved patient outcomes in Wolverhampton. Working together as a team from senior management level to general nursing staff has helped achieve good outcomes.

[EP388] DELIVERING COST SAVINGS & IMPROVED PATIENT CARE WITH A NEW GENERATION OF INNOVATIVE STANDARD SUPPORT SURFACE

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Thursday, May 14, 2015

E-poster session: Pressure Ulcer 1

Aim: In the last few years achieving a reduction in pressure ulcer incidents by focusing on prevention, has been one of the Dudley Group NHS Foundation Trust's key quality priorities. The increase in education around pressure ulcer prevention along with the desire to hit financial targets has brought about an increased usage of expensive dynamic mattresses, even in cases where this is of no additional clinical benefit for the patient. The Trust could not sustain the spiralling costs associated with this.

Method: At the start of 2014 a new type of pressure redistributing mattress comprised of foam and air cells that works with the principle of air displacement was introduced Trust-wide as the standard surface in almost all areas across the hospital with the following specific goals:

- Deliver cost savings on dynamic air systems
- Reduce additional costs associated with moving and handling
- Release nursing time 'back to care'
- Improve patient care by reducing the delay in getting patients on the appropriate support surface therefore reducing PU incidents and ensuring greater patient comfort

Results / Discussion: In the first 3 months the Trust has made financial savings equating to more than 25K with no increase in pressure ulcers.

Conclusion: The results achieved to date, following the implementation of the new standard support surface - both in terms of delivering a reduction in PU incidence and cost savings to the Trust – completely support the decision taken to prioritise investment in prevention by utilising the latest, most innovative products.