

[OP134] WHAT IS THE EXTENT OF PAIN SUFFERING, AND IS PAIN PREDICTIVE OF PRESSURE ULCER DEVELOPMENT?

Isabelle Smith¹, Leeds, United Kingdom , Sarah Brown¹, Leeds, United Kingdom , Elizabeth McGinnis², Leeds, United Kingdom , Nikki Stubbs³, Leeds, United Kingdom , Jane Nixon¹, Leeds, United Kingdom

¹*Institute of Clinical Trials Research, University of Leeds*

²*Leeds Teaching Hospitals NHS Trust*

³*Leeds Community Healthcare NHS Trust*

Friday, May 15, 2015

Key Session: Pressure Ulcer Risk Assessment: What do we know today?

Pain is an important symptom which aids the diagnosis of many conditions. A systematic review of health related quality of life in patients with pressure ulcers (PU), identified that patients' reports of localised skin pain associated with early PU development are ignored [1, 2, 3]. The PURPOSE Pain Cohort Study was a prospective cohort study conducted in order to explore the role of pain as an early predictor of Category ≥ 2 pressure ulcer (PU) development.

Patients were assessed according to pre-specified eligibility criteria in order to identify patients who were considered to be at high risk of PU development. Eligible patients who consented to take part were recruited to the study and followed up twice weekly for 30 days. There were 13 pre-specified skin sites which were assessed for each patient for the presence of pain and the condition of the skin.

The primary outcome is defined as the development of a Category ≥ 2 PU. Full stepwise variable selection was used throughout the analyses to determine which of 9 a priori factors of interest, including the presence of pain, were predictive of PU development. The primary analysis was conducted at the patient level and a secondary analysis was conducted at the skin site level. We will present the results from the patient level analysis which indicate that the presence of pain is an important risk factor for PU development after adjusting for other known risk factors, this conclusion is also strengthened by the results of the skin site level analysis.

[1] Spilsbury et al Jour Adv Nur 57(5):494-504, 2007

[2] Hopkins et al Journ Adv Nurs 56(4):345-353, 2006

[3] Gorecki et al JAGS 57: 1175-1183, 2009

[OP135] WHY DO PATIENTS DEVELOP SEVERE PRESSURE ULCERS?

Justin Keen¹, Leeds, United Kingdom

¹*University of Leeds; Leeds Institute of Health Sciences*

Friday, May 15, 2015

Key Session: Pressure Ulcer Risk Assessment: What do we know today?

Severe pressure ulcers are important indicators of failures in the organisation and delivery of treatment and care. We have a good understanding of patients' risk factors, but a poor understanding of the role of organisational context in their development. A study was undertaken in six sites in Yorkshire, England. The settings were sampled in order to maximise diversity, and included patients' own homes, acute hospital medical and surgical wards, a community hospital and a nursing home during a period of respite care. Data were collected about eight individuals who developed severe pressure ulcers, using a retrospective case study design. The data sources included interviews with individuals with severe pressure ulcers, and with staff who had treated and cared for them, and clinical notes. Four accounts indicated that specific actions by clinicians contributed to the development of severe pressure ulcers. Seven of the eight accounts indicated that they developed in organisational contexts where clinicians failed to listen and respond to the patients' or carers' observations about their risks or the quality of their treatment and care, clinicians failed to recognise and respond to clear signs that a patient had a pressure ulcer or was at risk of developing one, and services were not effectively coordinated. The findings support the conclusion that there was general acceptance of sub-optimal clinical practices in seven of the eight contexts studied.

[OP136] WHAT DIFFERENCE DOES A RISK ASSESSMENT TOOL MAKE?

Edda Johansen¹, Drammen, Norway

¹*Buskerud and Vestfold University College*

Friday, May 15, 2015

Key Session: Pressure Ulcer Risk Assessment: What do we know today?

Aim: To compare nurses' views on pressure ulcer risk assessment and preventive practices in two countries where there are differing approaches to risk assessment. In Ireland, risk scales are used together with clinical judgement, whereas Norway uses only clinical judgement.

Method: Two semi-structured focus group interviews were conducted where individual researchers carried out inductive content analysis of both transcripts, and came to a consensus on categories and themes.

Results: Independently of the risk assessment practices in the two countries, knowledge of risk, risk patients and preventive care coincided. However, in Ireland, the risk score was used to support the selection of equipment, whereas in Norway, nurses reported that appropriate equipment were not always available. Discrepancies existed in documentation practices. Nurses in Ireland were care plan oriented whereas in Norway, nurses did not discuss the importance of care plans for pressure ulcer prevention. However, in both countries, care plans were partly unused and they did not necessary reflect the care provided. A lack of staff competency was an important additional finding in both countries.

Conclusion: Regardless of whether clinical judgement was combined with a numeric risk assessment tool or not, risk factors, patients at risk and appropriate preventive practice were similarly described in both interviews. A lack of care plans, or a lack of applying existing care plans for prevention, might threaten patients' safety in both countries. Another concern in both countries is an identified lack of competency.

[OP137] FACTORS PREDICTING RISK OF PU DEVELOPMENT IN HOSPITAL POPULATION

Dimitri Beeckman¹, Ghent, Belgium

¹University Centre for Nursing and Midwifery, Ghent University

Friday, May 15, 2015

Key Session: Pressure Ulcer Risk Assessment: What do we know today?

Pressure ulcer development is a complex and multifactorial process. Several mechanisms lead to tissue damage as a result of exposure to pressure and/or shear. Oxygen deprivation (NPUAP, EPUAP, and PPIA 2014), direct cell deformation (Ceelen et al. 2008), ischemic reperfusion injury (Tsuji et al. 2005) and impaired lymphatic drainage (Miller and Seale 1981) are mechanisms that might lead to pressure ulcer development. Pressure ulcers can develop both superficially or in the deep tissues (Bouten et al. 2003). Skin and subcutaneous fat are more resistant to pressure than muscle tissue. The threshold for tissue damage resulting from periods of pressure and shear differs for skin, fat and muscle (Stekelenburg et al. 2006). Numerous studies identified risk factors predicting pressure ulcer development (Beeckman et al. 2013, Coleman et al. 2013). Several studies considered preventive measures when examining risk factors in a population of hospitalized patients (Schoonhoven *et al.* 2006). Only a few studies examined specific predictive factors in a population of at-risk hospitalized patients who received preventive care (Manzano et al. 2013). These studies identified predictive factors such as non-blanchable erythema, existing wounds, diabetes, low haemoglobin level on admission or before surgery (Nixon et al. 2006) and age in high-risk hospitalized patients (Manzano et al. 2013). A first and necessary step for successful pressure ulcer prevention is the correct identification of patients who are at risk for pressure ulcer development. This presentation will summarize the evidence about the factors predicting risk of pressure ulcer development in hospital population.

References:

- Beeckman D., Matheï C., Van Lancker A., Van Houdt S., Vanwalleghem G., Gryson L., Heyman H., Thyse C., Stordeur S. & Van den Heede K. (2013) Een nationale richtlijn voor Decubituspreventie. Good Clinical Practice (GCP). Federaal Kenniscentrum voor de Gezondheidszorg (KCE), Brussel.
- Bouten C.V., Oomens C.W., Baaijens F.P. & Bader D.L. (2003) The etiology of pressure ulcers: skin deep or muscle bound? *Archives of Physical Medicine and Rehabilitation* 84(4), 616–619.
- Ceelen K.K., Stekelenburg A., Loerakker S., Strijkers G.J., Bader D.L., Nicolay K., Baaijens F.P.T. & Oomens C.W.J. (2008) Compression-induced damage and internal tissue strains are related. *Journal of Biomechanics* 41(16), 3399–3404.
- Coleman S., Gorecki C., Nelson E.A., Closs S.J., Defloor T., Halfens R., Farrin A., Brown J., Schoonhoven L. & Nixon J. (2013) Patient risk factors for pressure ulcer

development: systematic review. *International Journal of Nursing Studies* 50(7), 974–1003.

- Manzano F., Pérez A.M., Colmenero M., Aguilar M.M., Sánchez-Cantalejo E., Reche A.M., Talavera J., López F., Frías-Del Barco S. & Fernández-Mondejar E. (2013) Comparison of alternating pressure mattresses and overlays for prevention of pressure ulcers in ventilated intensive care patients: a quasi-experimental study. *Journal of Advanced Nursing* 69(9), 2099–2106.
- National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. *Prevention and Treatment of Pressure Ulcers: Quick Reference Guide*. Emily Haesler (Ed.). Cambridge Media: Perth, Australia; 2014.
- Nixon J., Nelson E.A., Cranny G., Iglesias C.P., Hawkins K., Cullum N.A., Phillips A., Spilsbury K., Torgerson D.J., Mason S. & PTG(2006a) Pressure relieving support surfaces: a randomised evaluation. *Health Technology Assessment* 10(22), 1–180.
- Stekelenburg A., Oomens C.W., Strijkers G.J., Nicolay K. & Bader D.L. (2006) Compression-induced deep tissue injury examined with magnetic resonance imaging and histology. *Journal of Applied Physiology* 100(6), 1946–1954.
- Tsuji S., Ichioka S., Sekiya N. & Nakatsuka T. (2005) Analysis of ischemia-reperfusion injury in a microcirculatory model of pressure ulcers. *Wound Repair & Regeneration* 13(2), 209–215.