International Journal of Nursing Studies xxx (2014) xxx–xxx

Contents lists available at ScienceDirect

International Journal of Nursing Studies

journal homepage: www.elsevier.com/ijns

Nurses' pressure ulcer related judgements and decisions in clinical practice: A systematic review

Ray Samuriwo [a,b,*], Dawn Dowding [c,d,e]

[a] Lecturer, School of Healthcare Science, Cardiff University, UK
[b] Visiting Research Fellow, School of Healthcare, University of Leeds, UK
[c] Professor of Nursing, Columbia University School of Nursing, USA
[d] Professor of Nursing, VNSNY (Visiting Nursing Service of New York)
[e] Center for Home Care Policy & Research

ARTICLE INFO

Article history:
Received 4 September 2013
Received in revised form 7 April 2014
Accepted 9 April 2014

Keywords:
Clinical practice
Decision making
Judgement
Nurses
Pressure ulcer
Systematic review

ABSTRACT

Background: Pressure ulcers are considered to be an adverse outcome of care that should never occur in clinical practice. The formation of a pressure ulcer is also perceived to be an indicator of poor quality nursing care. Therefore, pressure ulcer prevention is a priority for nurses, healthcare professionals and healthcare organisations throughout the world. A key factor in pressure ulcer prevention and management is individual nurse decision making.
Objectives: To synthesise the literature on the judgement and decision making of nurses in relation to the assessment, prevention, grading and management of pressure ulcers in all care settings (hospital and community).
Design: A systematic search of published literature relating to judgement and decision making in nurses, with a focus on the prevention and management of pressure ulcers.
Methods: A search of electronic databases from 1992 to present, together with hand searching of the reference lists of retrieved publications, to identify published papers that reported results of studies evaluating the decision making of nurses in relation to the prevention and management of pressure ulcers. Abstracts were independently reviewed by two authors and full text of potentially relevant articles retrieved. Each paper included in this systematic review was evaluated using recognised appraisal criteria relevant to the specific study design. Included papers provided empirical data on key aspects of nurses' pressure ulcer related judgements and decision making. Data were synthesised into themes using narrative analysis.
Results: Sixteen studies and one systematic review were included in the review, focusing on pressure ulcer risk assessment, pressure ulcer prevention, grading of pressure ulcers and treatment decisions. The results indicated that assessment tools were not routinely used to identify pressure ulcer risk, and that nurses rely on their own knowledge and experience rather than research evidence to decide what skin care to deliver.
Conclusions: Emphasising pressure ulcer risk assessment and pressure ulcer grading in clinical practice is unlikely to deliver improved outcomes. Further research into nurses' pressure ulcer related judgements and decision making is needed and clinicians must focus on the consistent delivery of high quality care to prevent and mange pressure ulcers to all patients in clinical practice.

* Corresponding author at: School of Healthcare, University of Leeds, UK. Tel.: +44 02920687752.
E-mail address: samuriwor@cf.ac.uk (R. Samuriwo).

http://dx.doi.org/10.1016/j.ijnurstu.2014.04.009
0020-7489/

What is already known about the topic?

- Pressure ulcer risk assessment scores are designed to help nurses to make informed judgements about their patients' risk of developing a pressure ulcer.
- All patients must undergo a structured assessment of the risk of pressure ulcer formation which uses a pressure ulcer risk assessment score and clinical judgement on admission and at regular intervals as determined by the patient's condition.
- The information gathered during a structured pressure ulcer risk assessment with a pressure ulcer risk assessment score should provide nurses with the information that they need to plan and deliver care to prevent and manage pressure ulcers.

What this paper adds

- Most nurses do not use a pressure ulcer risk assessment score to work out their patients' risk of pressure ulcer formation and very few nurses carry out a structured pressure ulcer risk assessment when their patient is admitted.
- Some nurses feel that their clinical judgement is a more effective way of identifying which patients will develop a pressure ulcer than a pressure ulcer risk score, but clinical judgement *is not* a very accurate predictor of pressure ulcer formation.
- The accuracy of nurses' grading of pressure ulcers varies with the grade and location of pressure ulcers.
- Nurses take into account a wide range of factors in their pressure ulcer related decision making, but they tend to rely on their own knowledge and experience rather than research evidence to make pressure ulcer related decisions.

1. Introduction

Pressure ulcers are a significant issue in health care, both in the UK and internationally. It is estimated that 4–10% of hospitalised patients in the UK develop a pressure ulcer during their hospital stay and that there are 22–23 000 patients in UK hospitals with a pressure ulcer at any given time (Butler, 2008; Posnett and Franks, 2007). The best available epidemiological studies report a case mix unadjusted pressure ulcer prevalence rate of 5–32% of all UK hospital patients (Butler, 2008). More than 50 US and European studies published between 1988 and 2008 report a pressure ulcer prevalence rate of 3.5–83.6% (Aronovitch, 2007; Barrois et al., 2008; Bours et al., 2002). Estimates of the number of people with pressure ulcers are based on studies with methodological variations which make it difficult to make meaningful comparisons.

There is a considerable human cost associated with the development of pressure ulcers. Skin disintegration causes pain, suffering and mental anguish for patients (Barrois et al., 2008; Briggs et al., 2013; Gorecki et al., 2010). These side effects of pressure ulcers are very difficult to quantify numerically (Baranoski, 2006; Bick and Stephens, 2003). There is also some evidence which shows that pressure ulcers and other associated complications can result in death, but the exact nature of this relationship is unclear (Abdel et al., 2005; Berlowitz and Frantz, 2007; Thomas, 2006). There are significant costs associated with the management of pressure ulcers, which is estimated to be between £1.8 and £4.5 billion per annum in the UK or 5% of the total NHS expenditure (Benbow, 2009; Clark, 2007; Posnett and Franks, 2007). The cost of managing pressure ulcers in other countries is also high and it is estimated to be $285–296 million in Australia and €250 million in Ireland (Gethin et al., 2005; Moore et al., 2013; Webster et al., 2010). The estimates are predicated on reviews of a number of studies, but they exclude associated costs like the patient's lost earnings and legal costs. Most estimates of the financial costs of managing pressure ulcers exclude patients who are in the community, so the true cost of managing pressure ulcers is probably higher (Ousey, 2010; Posnett and Franks, 2007).

Most pressure ulcers are believed to be preventable if the appropriate measures are implemented to maintain skin integrity (Jordan-O'Brien and Cowman, 2011; Moore and Van Etten, 2011). The development of pressure ulcers is considered to be an adverse outcome associated with the quality of care provided by nurses, and has been identified as a nursing specific patient outcome in different healthcare settings throughout the world (Griffiths et al., 2008; Jull and Griffiths, 2010; Van den Heede et al., 2007).

Pressure ulcer prevention is an integral part of nursing, but there is evidence which suggests that patients may not receive an appropriate level of care to maintain their skin integrity. More than 10 951 (67%) of 16 344 patients in Bours et al.'s (2002) Dutch study, 44 (60%) of 74 patients in Gunningberg (2005) Swedish study and 24 (34%) of 71 patients in Wann-Hanson et al. (2008) Swedish study were not given the care that they needed to protect their skin. A pan European EPUAP study (Clark et al., 2004; Vanderwee et al., 2007) reported that 856 (83%) of 1031 patients who were assessed as being at risk of pressure ulcers in the UK and 1909 (90.3%) of 2114 patients at risk of pressure ulcer formation throughout Europe did not receive an adequate standard of care to maintain their skin integrity. Each of these studies has its limitations, but the findings of all of these studies suggest that the importance of pressure ulcer prevention is not reflected in the skin care that is delivered to patients.

1.1. Nurses' pressure ulcer related judgements and decision making

In the UK, the importance attached to the prevention of pressure ulcers by nurses is highlighted in key policy and practice drivers like the Essence of Care (DH, 2010), the Commissioning for Quality and Innovation (CQUIN) payment framework (DH, 2008; NHS Harmfreecare, 2012) and the Quality, Innovation, Productivity and Prevention (QIPP) programme (DH, 2011). Nurses play a pivotal role in pressure ulcer prevention and management because they are directly involved in key aspects of pressure ulcer prevention such as risk assessment and

Please cite this article in press as: Samuriwo, R., Dowding, D., Nurses' pressure ulcer related judgements and decisions in clinical practice: A systematic review. Int. J. Nurs. Stud. (2014), http://dx.doi.org/10.1016/j.ijnurstu.2014.04.009