DEVELOPING THE EVIDENCE BASE FOR HYGIENE AND EMOLLIENT PRACTICES

The gap in knowledge in this vital area of nursing care demands a systematic review, says Fiona Cowdell

Abstract

Maintaining skin integrity is an essential part of ensuring health and wellbeing in older people, and personal hygiene and emollient practices are central in achieving this aim. As nurses we are expected to deliver evidence-based care. However, there is a significant lack of evidence about how best we should provide day-to-day care that promotes skin health for older people.

This article briefly examines the concept of evidence-based practice, reveals the gap in knowledge on skin hygiene and emollient practices for older people and justifies the need for a systematic review in this area. Finally it introduces a Cochrane protocol for a review that will collate and review existing knowledge and identify areas for future research. The application to practice of the new evidence generated either by the Cochrane review or by subsequent research is examined.

Keywords
Emollients, evidence-based practice, personal hygiene, research, skin health, skin integrity

FOR THE past two decades all healthcare professionals have been exhorted to engage in evidence-based practice (EBP) (Nursing and Midwifery Council 2015). EBP is the ‘conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients’ (Sackett et al 1997) or, put more simply, ‘integrating individual clinical expertise and the best external evidence’ (Sackett et al 1996). A critical component of EBP is the integration of patient values and clinical realities with the best research to inform decision making (Shaneyfelt et al 2006). Multiple models of EBP have been devised but all incorporate the same essential parts: ‘Search, critique, and synthesis of evidence, implementation of evidence and evaluation of its impact on health-care practice’ (Chan 2013). A diagrammatic representation of this evidence-based information cycle is provided by Hayward (2015) (Figure 1, page 18).

Evidence-based nursing practice (EBNP) is allied to the notion of EBP and has been defined as the ‘application of the best evidence in clinical decision-making by integrating clinical expertise with research findings, while taking into consideration the values and preferences of patients’ (Eizenberg 2011).

The process of EBNP has five essential elements (Melnyk and Fineout-Overholt 2005):
- Formulating a question.
- Identifying relevant information by systematically searching the literature and clinical guidelines.
- Critically evaluating this evidence in terms of validity, relevance and feasibility.
- Integrating the research evidence with clinical experience and the values and preferences of the patient.
- Assessing treatment outcomes.

EBNP has many benefits including achieving the best outcomes for patients (Perry 2011), underpinning consistent decision making and advancing cost effectiveness (Le May 1999).
The synthesis of art and science is lived by the nurse in the nursing act.

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The integration of evidence in nursing practice can be seen as far back as the 1850s when Florence Nightingale applied evidence to improve quality of care and examined the effect on patient outcomes (Chan 2013). However, application of evidence in nursing care remains, at best, patchy. Historically nursing practice has been based on ritual, tradition, guidance from nursing colleagues, knowledge gained from nurse education and the preferences of colleagues from allied professions. While the use of EBNP has developed significantly over time, there are indications that implementation is far from widespread. The extent to which nurses believe in and use EBNP remains debatable. Some authors suggest that nurses have a positive view of EBNP and that engagement in this approach increases job satisfaction (Poe and White 2010, Majid et al 2011). However, relatively recent studies suggest that, in practice, nurses continue to rely predominantly on informal and experiential resources rather than on empirical research (Spenceley et al 2008, Rycroft-Malone et al 2009, Traynor et al 2010).

Barriers to implementation of EBNP include: lack of time, lack of understanding of available research (in particular statistics), limited authority to introduce new practices, insufficient time to read research and inadequate resources in the clinical setting (Brown et al 2010). The challenges of implementing EBNP should not be underestimated. As Perry (2011) suggests, nurses often face complex, multi-component issues for which there is research of variable quality often derived from specific patient groups. This means that nurses are confronted with research of huge complexity when attempting to offer the best available patient care and, specifically in the case of hygiene and emollient practices, a lack of high quality evidence.

Hygiene and emollient practices
Worldwide the population is ageing (Department of Economic and Social Affairs 2013) and the number of people who live in residential care or require hospital inpatient stays is steadily increasing (Department of Health 2009, Forder and Fernandez 2011, Centers for Disease Control and Prevention 2015a, 2015b).

Skin is a complex organ that inevitably undergoes intrinsic and extrinsic changes over time. These changes alter its structure and function and reduce the effectiveness of the barrier function, which in turn increases vulnerability to skin breakdown (Fore 2006, Voegeli 2012). Changes include reduction in cell turnover, sensory receptors, blood supply, subcutaneous fat and production of sebum and sweat, thinning of the epidermis and decrease in integrity between epidermis and dermis and thickening of collagen fibres (Cowdell et al 2014). The skin is also affected by environmental factors such as sun exposure (Lawton 2010).

In older people, overzealous washing (particularly with harsh products), lack of hygiene, traumatic injury, limited mobility, incontinence, depression and dementia, polypharmacy, diabetes and vascular changes and poor nutrition, can further compromise skin integrity (Finch 2003). Skin integrity is vital in maintaining health and wellbeing, and the changes described above make skin more vulnerable to damage (Baranoski and Ayello 2004) and all the consequent problems of breakdown. Nurses therefore need to work with patients to optimise skin care regimens based on the best available evidence.

Personal hygiene and emollient practices can have a significant effect on skin integrity. Such practices are usually completed by individuals in private (Evans 2004); however, older people may experience increasing need for assistance. Current practice in personal hygiene and emollient use appears to be based predominantly on ‘tried and tested practice’ (Lentz 2003), since there is a severe lack of evidence base (Holloway and Jones 2005, Hodgkinson et al 2007). There is some
consensus on recommended practices in providing personal hygiene care, however, this is largely based on clinical experience; see Cowdell (2011) for further detail.

There are useful resources, for example, the British Dermatological Nursing Group statement on emollient use (Penzer 2012), however, these are not specific to older people. The evidence base specific to this group of patients is beginning to be developed; see, for example, Kottner et al. (2013), however there is still much work to be done. Recommendations from clinical expertise include regular bathing in warm rather than hot water, limited soaking and washing, avoiding soap and other harsh products and drying the skin gently (Cowdell et al 2014). These recommendations are not necessarily well known or applied to practice and there are suggestions that some existing practices may be detrimental to skin health (Voegeli 2008).

Skin breakdown can have a devastating effect on the older person. It presents a clinical challenge and can cause substantial morbidity (Farage et al 2008). It can lead to longer stays in hospital or care settings, reduce independence and be costly to the individual and acute and community care providers (Gardiner et al 2008).

### Developing an evidence base

We acknowledge that personal hygiene and emollient practices play a vital role in maintaining skin integrity in older people and that these interventions can be time consuming. At present care is based on ‘custom and practice’ as there is a limited evidence base. Today there is an expectation that nurses should be able to ‘locate, evaluate and synthesize research findings’ (Theroux 2010). In reality front line practitioners do not always have the time, skills or resources to conduct such reviews. Considering the absence of an evidence base for a practice that is undertaken by so many nurses, there is now a move to develop such knowledge with the first stage being to complete a Cochrane review.

### Cochrane reviews

For more than 20 years Cochrane reviews have provided gold-standard, internationally recognised evidence for practice (New 2013). These reviews collate all the published evidence relating to a specific research question using explicit and systematic methods that minimise the risk of bias (Higgins and Green 2011). To begin to answer questions about optimal hygiene and emollient practices for older people, a multidisciplinary team led by the author of this article has produced a Cochrane protocol. This has been rigorously peer reviewed and will be used as the framework for a full Cochrane review. The protocol specifies the objective, population, types of studies that will be included and interventions and outcome measures of interest; the protocol information for this review is summarised in Table 1 and can be viewed in full at Cowdell et al (2014).

This Cochrane review is now being undertaken and the results will be published and widely disseminated in early 2016.

### Application to practice

Cochrane reviews can provide high-quality research evidence about specific interventions and often highlight the need for further research. However, this evidence alone is not sufficient to change day-to-day nursing practice. The next requirement is to take empirical evidence and use a systematic process of tailoring it to the local context and evaluating effect (Perry 2011).

There are several models offering structured formats for the design and development of evidence-based complex (nursing) interventions, for example, Kok et al (2004) and Medical Research Council (2008). Although details of the various models differ, the fundamentals of advocating clear intervention development and mixed methods of evaluation are universal. Van Hecke et al (2011) provide a robust example of a systematic approach to implementing EBP. They suggest three phases:

<table>
<thead>
<tr>
<th>Objective</th>
<th>To assess the effects of hygiene and emollient interventions for maintaining skin integrity in older people in hospital and residential care settings</th>
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<tr>
<td>Population</td>
<td>Men and women aged ≥60 years who are in hospital or residential care settings</td>
</tr>
<tr>
<td>Type of studies</td>
<td>Randomised controlled studies of hygiene and emollient interventions</td>
</tr>
<tr>
<td>Interventions</td>
<td>Skin cleansing, skin drying, emollient regimens</td>
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</tbody>
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| Outcome measures | Primary outcome measures:  
- Frequency of skin damage  
- Side effects from intervention  
Secondary outcome measures:  
- Transepidermal water loss  
- Stratum corneum hydration  
- Erythema (redness)  
- Clinical score of dryness  
- Clinical score of itch |

(Cowdell et al 2014)
Collection of ‘building blocks’ to inform design of intervention including literature review, problem and needs analysis, and analysis of current practice.

Intervention design.

Validation of the nursing intervention including real-world testing and fine-tuning.

Van Hecke et al (2011) have helpfully, and somewhat unusually, provided sufficient information about their implementation and evaluation process to enable it to be used by other nurses in their own practice areas.

Conclusion

Maintenance of skin integrity is essential for the health and wellbeing of older people. Hygiene and emollient practices are core nursing activities and have a significant effect on skin health. At present there is a dearth of evidence about such practices. A Cochrane review is in progress that may generate relevant evidence, however, reviews alone are not sufficient to change nursing practice. When new and robust evidence is produced, one of the available models for translating evidence into practice should be used to ensure optimum skin care for older people.

References


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Conflict of interest

None declared