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A comparison of the management of venous leg ulceration by specialist and generalist community nurses: A judgement analysis

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ABSTRACT

Background: Venous leg ulcer management in the UK varies significantly. Judgements made by nurses contribute to this variability and it is often assumed that specialist nurses make better judgements than non-specialist nurses. This paper compares the judgements of community tissue viability specialist nurses and community generalist nurses; specifically, the ways they use clinical information and their levels of accuracy.
Objectives: To compare specialist and non-specialist UK community nurses' clinical information use when managing venous leg ulceration and their levels of accuracy when making diagnoses and judging the need for treatment.
Design: Judgement analysis.
Setting: UK community and primary care nursing services.
Participants: 18 community generalist nurses working in district (home) nursing teams and general practitioner services and 18 community tissue viability specialist nurses.
Methods: Data were collected in 2011 and 2012. 18 community generalist nurses and 18 community tissue viability specialist nurses made diagnostic and treatment judgements on 110 clinical scenarios and indicated their confidence in each of their judgements. Scenarios were generated from real patient cases and presented online using text and photographs. An expert panel made judgements, and reached consensus on the same scenarios. These judgements were used as a standard against which to compare the participants. Logistic regression models and correlational statistics were used to generate various indices of judgement "performance": accuracy, consistency, confidence calibration and information use. Differences between groups of nurses with different levels of characteristics linked to expertise were explored using analysis of variance.
Results: Specialist nurses had similar cue usage to the generalist nurses but were more accurate when making diagnostic and treatment judgements.
Conclusion: It is not obvious why the tissue viability specialist nurses were more accurate. One possible reason might be the greater opportunities for 'deliberate practice' afforded to specialists. However, restricting aspects of practice only to specialist nurses is likely to hinder the judgement performance of generalists.

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What is already known about the topic?

- Leg ulcer care is an important part of UK community nurses' workload but previous evidence suggests the quality of diagnosis and treatment of venous leg ulceration may be suboptimal and information to inform the design of clinical improvement interventions is needed.
- Nurses designated as 'specialist' are likely to have greater influence in terms of directing care but it is not known whether the care they deliver is of higher quality.

What this paper adds

- In this study community tissue viability specialist nurses were more accurate at making diagnoses and treatment judgements about compression therapy than generalist community nurses. The reasons for this are unclear but may be related to their greater opportunities for 'deliberate practice' rather than education.

1. Background

Globally, many people are affected by leg ulceration (Briggs and Closs, 2003). Diagnostic judgements and treatments are the key determinants of the quality of care delivered and the clinical outcomes achieved. In the UK, most patients with leg ulcers receive care from community nursing staff working as part of a larger multi-disciplinary team. Whilst many patients never receive care from a clinician designated as expert in leg ulcer care (e.g. a specialist tissue viability nurse), UK audit evidence suggests that practice and outcomes vary in ways that are unwarranted (Royal College of Nursing, 2001; Royal College of Nursing, 2008; Srinivasaiah et al., 2007; Vowden and Vowden, 2009).

The title 'specialist' implicitly denotes a practitioner with greater expertise in a domain. 'Expertise' refers to the "characteristics, skills, and knowledge that distinguish experts from novices and less experienced people" (Ericsson, 2006, p. 12). In nursing, expertise has been defined as flexibility and speed in practice (Benner, 1984; Ericsson et al., 2007), but reliably identifying the characteristics that mark a practitioner as 'competent' or 'expert' has proved challenging (Ericsson et al., 2007).

Nurses designated as 'expert' through their role (such as specialist nurses) are likely to have greater influence in directing care and thus affecting healthcare processes and outcomes (RCN, 2010). They may also cost more than generalists. To properly consider specialists' value it is useful to evaluate the relationship between 'expertise' and the levels of accuracy achieved in clinical practice.

Expertise can be examined as a relative or absolute concept. In the relative approach, expert practice is compared to that of novices, on the basis that novices are able to achieve an expert level of proficiency. Benner's Theory of Intuition and Expertise (Benner, 1984) – based on the Dreyfus' model of skill acquisition (Dreyfus and Dreyfus, 1986) – has heavily influenced nursing's view of expertise (Eraut et al., 1995; Lamond and Thompson, 2000). From this perspective, novice nurses require rules to guide their action whereas experienced, expert nurses deploy internalised decision-making processes such that their practice appears intuitive and fluid. In contrast to the relative approach, the absolute approach to expertise compares individuals using performance measures, such as outcomes achieved or the speed with which a task is successfully performed (Chi, 2006). The nature of such tasks matters. A task should encapsulate the essence of expertise and be specific to a particular area of practice (Ericsson, 2006). One way of defining the essence of expertise from an absolutist perspective is to choose a judgement which has been tested on sufficient people and contexts to make a correct answer possible and for the uncertainty associated with the probability of achieving a correct answer to be transparent and explicit. Research evidence associated with the correlation between information in a task environment and a judgement outcome provides one such basis.

In the specific domain of nursing patients with leg ulcers, there is good evidence to support the use of Doppler aided assessment of ankle-brachial pressure index (ABPI) to detect arterial disease for differential diagnosis (Royal College of Nursing, 2006) and robust clinical trial evidence to support the use of multi-layer high compression for promoting healing in venous leg ulceration (O'Meara et al., 2012). Therefore, a representative task (Cooksey, 1996b) for evaluating expertise in managing venous leg ulceration is the accurate diagnosis of the aetiology of a leg ulcer (with an appropriate recognition of the value of Doppler assessment of ABPI) and an appropriate treatment judgement regarding whether or not to apply high compression.

2. Methods

2.1. Aims

The aim of the study was to assess the impact of expertise on the judgement and decision making of community nurses in relation to the management of venous leg ulceration.

2.2. Theoretical framework and research design

This study was nested within a judgement analysis which assessed the accuracy of the diagnostic judgements and treatment choices of UK community nurses managing venous leg ulceration and which has been previously reported in this journal (Adderley and Thompson, 2015). Judgement analysis takes as its starting point that the accuracy of a judgement depends on the judge's (i.e. nurse's) use of information present in a judgement environment and the uncertainty present in an environment (Cooksey, 1996b). This theoretical model can be portrayed as a form of lens in which the nurse's judgement "focuses" the information contained in a clinical situation (Fig. 1).

In this model the judgement environment is termed the ecology. The left side represents the ecology (e.g. the 'correct' diagnosis). Various information cues are linked to