What are the challenges for community nurses in implementing evidence-based wound care practice? (part 1)

KEY WORDS
- Barriers
- Community nursing
- Evidence-based practice
- Wound care

Aim: To identify if community nurses caring for patients with wounds experience challenges in the implementation of evidence-based practice (EBP) and the use of evidence-based clinical decision-making tools. **Methods:** A mixed methods approach was used; a quantitative questionnaire was used to gain background information, assist with the formation of qualitative questioning, and identify participants to take part in semi-structured interviews. Twenty (74.07%) were returned and using purposive sampling, six individual interviews were conducted with nurses of varying clinical grade and experience. **Results:** Challenges fell into six key themes; the individual, the organisation, the research, communication, education and external factors including patient concordance. Results showed limited use of evidence-based practice and that while EPB was considered, intuitive and ritualistic practice was widely used. Participants valued the support of experts in wound care and agreed that easy to understand guidelines and protocols were useful for supporting the translation of theory into practice. **Conclusion:** These findings offer a better understanding of the challenges experienced by community nurses in their daily practice. Information gained will inform the future development of clinical decision-making tools, education and clinical organisational strategy. Further research is needed to discover if similar challenges are apparent within nursing practice locally and nationally to determine if these findings extend beyond the area studied.

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This article is based on the author's MSc in Healthcare Practice submitted to the University of Essex. The author was a consultant nurse tissue viability at the time of this study.

Data from the Health Improvement Network (THIN) database estimates that management of the (approximately) 2.2 million chronic wounds cost the NHS £4.5–5.1 billion (Guest et al, 2015) per annum. The majority of patients (77%) with chronic wounds are cared for in the community setting (Ousey et al, 2013), thus, nurses a large proportion of nurses time is spent in providing wound care (Drew et al, 2007). Community nurses make autonomous decisions with minimal supervision (NHS England, 2018); they are accountable for their practice and should make decisions based on the available evidence whilst ensuring patient-centred care (Nursing and Midwifery Council, 2015).

Wound management research can improve patient care and clinical outcomes by standardising assessment, planning and implementation of treatment (Ho and Bogie, 2007). However, practice varies according to the knowledge and skills of the practitioner (Dowsett, 2009). While education seeks to equip nurses with the appropriate knowledge and skills, changing practice is not always sustainable. Therefore, are nurses consistently making informed decisions based on the best available evidence or are there barriers which prevent them from doing so? Rangachari et al (2013) suggest that the barriers to achieving sustained change in practice are multifactorial and include both individual and organisational factors.

After a local audit in 2011 confirmed a lack of consistency in the accurate diagnosis of wound infection and over-use of antimicrobial wound care products, an evidence-based clinical pathway was

developed and implemented throughout the local organisation along with a comprehensive education programme (Grothier and Ousey, 2014). Anecdotal evidence, including the review of care plans during joint visits with community nurses and review of patients referred for tissue viability advice, suggested the pathway was not be being utilised effectively. Therefore it was important to establish if there were any challenges hindering this.

This study aimed to explore if evidence based clinical tools can be used to positively influence patient care. In addition the research aimed to explore if there were any challenges which prevented nurses using evidence based tools to support clinical decision making.

LITERATURE REVIEW

The SPICE (Setting, Population, Intervention and Evaluation) framework (Croft, 2016) was used to develop the question, *'Are there any challenges for nurses working in a community setting in implementing evidence-based practice in wound care?'*

Electronic database resources were accessed via Athens including CINAHL complete BNI and Medline records. Limits were applied to narrow the search results which included the date range of 2004 to 2016 and only literature published in the English language. In total, 13 studies and one relevant textbook were considered.

There was little research regarding the implementation and sustainability of evidence-based practice (EBP), potential challenges within community nursing, and in relation to wound management practice within the UK, although barriers to implementing EBP within healthcare appear internationally (Donnellan et al, 2013). The literature identified that there are multiple reasons why research evidence is not implemented or changes in practice sustained. These include the individual, the organisation, and communication/education.

The individual

Irwin et al's (2013) qualitative study exploring the experiences of implementing EBP change by oncology nurses used reflective narratives to establish several factors that are crucial to the success of sustainable change for utilising and implementing clinical evidence. These are:

- Time
- Organisational support
- Engagement and teamwork
- Communication,
- Planning and maintaining focus.

Data were captured contemporaneously as nurses were undertaking a formal programme of education and an evidence-based project, which strengthens the study. Conversely, this could be a limitation as one can assume that participants were already motivated as individuals, and engaged as part of an enthusiastic team. However, the information gained and lessons learnt are useful to other health professionals implementing evidence-based practice initiatives.

Successful adoption and implementation of research evidence can depend upon a person's empathy, intelligence and a positive attitude to and ability to cope with change (Rogers, 1983). Dugdall and Watson's (2009), a cross-sectional retrospective postal survey of 156 acute and community registered nurses, explored if individual attitudes affected the adoption of evidence-based wound care practice. Results showed that whilst there is limited research evidence to support wound management, even when a positive attitude is adopted there is generally a poor uptake of evidence and that ritualistic practice exists in the dressing selection and procedures. However, results suggest an increased positive attitude to wound care practice in tissue viability link nurses, nurses with increased knowledge from formal training, or with a first degree.

Funk et al (1991) support this theory and built upon Rogers' (1983) model of innovation diffusion which identifies four key concepts; the characteristics of the adopter; the organisation; communication, and the innovation. Funk et al's (1991) quantitative randomised survey study examined the barriers to research utilisation and found that nurses felt they didn't always understand or see the value of research, or they were unable to identify it within their practice area. Participants also felt isolated and lacked the skills to critically evaluate research evidence or simply did not have an understanding of the need for change. Nurses also reported feeling they lacked authority to make changes and were not supported by medical colleagues (Funk et al, 1991). One strength of the study

was that the questionnaire allowed participants to add additional barriers experienced; however, none were identified to support the validity of the tool.

Results from a qualitative focus group that explored barriers to EBP amongst nurses in Belgium (Hannes et al, 2007) support the findings of Funk et al (1991). The authors identified five major themes to EBP implementation including:

- Doctors
- Patients and families
- Management/supervisor
- Nurses/nursing
- Evidence.

Nurses often felt they did not want to question doctors and senior colleagues, and suggest that nurses refrain from implementing evidence-based clinical pathways as they are often overruled by doctors who felt threatened by their knowledge and expertise. Nurses also expressed feeling undermined by management and that priority was given to saving money and achieving targets, which conflict with providing quality care based on the best available evidence. The study also highlights that nurses were critical of their own profession in that they felt their colleagues needed to take responsibility and demonstrate autonomy when caring for patients, and stating that EBP has the ability to empower nurses and increase confidence in clinical decision making.

A more recent Australian study used grounded theory to explore how health professionals made decisions in wound management practice (Gillespie et al 2014). Despite the seven intervening years since the Hannes et al (2007) study, they too identified that individual nurses felt they could not challenge historical practice, particularly if they were junior and less experienced or working within a setting where the culture was opposed to change. However, the authors also reported that where nurses worked in an environment that fostered a culture of enquiry, they openly challenged the outdated or poorly supported practice.

The organisation

Organisational support and creating a culture where EBP is fostered is crucial for the successful implementation and longevity of new ideas and concepts. Organisational objectives may have a significant impact on whether change driven by clinical evidence is supported in practice. (Fitzsimons and Cooper, 2012). A systematic review of the literature was conducted to explore the evidence of organisational structures which may enhance the effectiveness of the promotion of EBP within nursing (Flodgren et al, 2014). The reviewers extrapolate that a lack of organisational support for EBP can potentially be detrimental to the quality of care provided to the patient. They highlight that nurses often do not practice according to the best evidence available, but acknowledge that studies do identify the difficulties in bringing about change via policies and procedural guidelines as they are often beyond the scope of individuals. They go on to discuss multiple organisational models which have been developed to support the implementation of EBP but do not explore further the adoption and outcomes measuring the effectiveness of such models.

Hannes et al (2007) also identify a lack of organisational support as a significant barrier. They found that staff experienced difficulties in accessing information or being able to read clinical literature when on duty; this may be related to insufficient staffing or lack of IT skills or IT training, which can be beyond the scope of the individual to change without organisational support to learn.

A survey of nurse managers and nurses identified that whilst both agreed that applying evidence to practice enhanced patient care and outcomes, a high number of nurses felt that the working environment limitations were not given enough consideration (Gale and Schaffer, 2009). The nurse managers had an opposing view which the researchers suggest could be due to a lack of insight of the clinical environment and the challenges nurses face in everyday practice. There was also disagreement where nurses felt access to information was difficult and the nurse managers did not view it as an issue, and that information was readily available for nurses. The small sample size is relevant to practice in that it recognises the importance of champions for change being accessible to nurses along with sufficient time, resources and information to create a successful culture for change.

Gerrish et al (2011) propose that clinical management could foster a culture of clinical

facilitation, utilising the skills of advanced nurse practitioners (ANP) and clinical nurse specialists (CNS) as knowledge brokers. Sustainability of EBP can be supported where clinical facilitation by experts is embedded within the multidisciplinary team and which promotes evaluation and problem-solving.

Irwin et al (2013) discuss the importance of encouraging all stakeholders to become part of the evidence-based healthcare process including clinicians, management and the wider multidisciplinary team. Furthermore, they suggest that engaging the organisation and the multidisciplinary team in the feedback process helps to inform the planning, development, monitoring and training. Positive leadership and acknowledgement of the value of EBP by the organisation can have a significant impact on the environment and the clinician's ability to overcome barriers and frustrations such as time constraints.

Rogers (1983) theory of diffusion of innovation has been considered by many of the authors and alludes to the speed at which innovation may be implemented in practice. Rogers (1983) proposes it is dependent on key decision makers including senior executive staff within an organisation and their commitment to the process. However, he discussed that should a change in practice be enforced by a governing body, government department or law then this may supersede any initial decision-making process and can serve to support EBP. An example he reports is in relation to car manufacturers offering seatbelts as an added extra in a car; when legislation was introduced to enforce wearing of a seat belt, it was no longer an optional extra but a statutory requirement.

Within healthcare, this could be compared with infection prevention strategies which are based on clinical research evidence. An example of this is evidence supports that good hand hygiene prevents the spread of healthcare-acquired infections, however, since the introduction of The Health and Social Care Act (2008) which holds health care providers accountable for infection prevention, organisations and managers are required to implement evidence-based strategies as mandatory.

However, organisations need to be committed to supporting a culture of learning and EBP if they want to assure safe practice. A pilot study carried out in an American hospital aimed to explore knowledge, perceptions, attitudes and behaviours of nurses in relation to infection prevention and adherence to best practice guidance (Jessee and Mion, 2013). A survey of nurses identified a lack of knowledge of infection prevention procedures and non-participant observation confirmed poor adherence to local policy and guidelines in practice. Reasons given for non-adherence to EBP guidance included individual attitude, organisational culture, lack of time and the difference between perceived adherence to guidance than that actually practiced This study demonstrates that despite at least 10 years of focus on the prevention of healthcare-acquired infection and a statutory obligation to patient safety, implementation and sustainability of EBP poses a great challenge.

A quantitative study carried out by Funk et al (1995) used the 'BARRIERS' scale to survey the experiences of administrators (managers) regarding potential barriers to the implementation of research. The findings of this study support the opinion that to encourage utilisation of research it is necessary to have an organisational culture that recognises the benefits of EBP and promotes senior management facilitation. One of the key barriers identified by nursing management was stated as the nurse's lack of awareness of relevant research to support their practice. However, they also acknowledged that the presentation of research is sometimes difficult to understand and interpret which may lead to apathy in implementing change by nursing staff. This study built upon a previous study exploring views using the same methodology and concluded that the results were similar but highlighted that nursing administrators/managers recognised that enhanced facilitation would support nurses with implementing research findings.

Challenges may also exist with internal support for change due to conflicting priorities of individuals and departments. Bradley et al (2004) discuss in a qualitative study capturing the experiences of staff implementing the adoption of an innovative programme of care, namely Hospital Elder Life Programme (HELP) that it is important to determine the reality of the care setting. Thematic analysis identified challenges similar to the results of other studies, including

Irwin MM, Bergman RM, Richards R (2013) The Experience of implementing evidence-based practice change: A Qualitative Analysis. *Clin J Oncol Nurs* 17(5): 544–9

Jessee MA, Mion LC (2013) Is evidence guiding practice? Reported versus observed adherence to contact precautions: A pilot study. *Am J Infect Control* 41(11): 965–70

Jones KR, Fennie K, Lenihan A (2007) Evidence-based management of chronic wounds. *Adv Skin Wound Care* 20(11): 591–600

Morgan D (1998) Practical strategies for combining qualitative and quantitative methods: application to health research. *Qual Health Res* 10(3): 362–76

NHS England (2018) Agenda for Change Pay Rates. Available at: https://www.healthcareers.nhs.uk/about/careers-nhs/nhs-pay-and-benefits/agenda-change-pay-rates (accessed 13 August 2018)

Nursing & Midwifery Council (2015) *The Code: Professional Standards of Practice and Behaviour for Nurses and Midwives.* Available at: www.nmc-uk.org/code (accessed 13 August 2018)

Ousey K, Cooke L (2011) Understanding the importance of holistic wound assessment. *Practice Nurse* 22(6): 308–14

Ousey K, Stephenson J, Barrett S et al (2013) Wound care in five English NHS Trusts: Results of a survey. *Wounds UK* 9(4): 20–8

Rangachari P, Rissing P, Rethemeyer K (2013) Awareness of evidence-based practices alone does not translate to implementation: Insights from implementation research. *Qual Manag Health Care* 22(2): 117–25

Rogers EM (1983) *Diffusion of Innovations*. 3rd edn. The Free Press, New York

Saldana J (2016) *The Coding Manual for Qualitative Researchers*. 3rd edn. SAGE Publications Ltd, London

Winter GD (1962) Formation of the scab and the rate of epithelialisation of superficial wounds in the skin of the young domestic pig. *Nature* 193: 293–4

internal support, effective clinical leadership and the environment. The authors concluded that despite the proven efficacy of the HELP programme, which required a cultural shift within a particular time frame, longer-term strategies may be necessary to avoid overwhelming clinicians and staff involved.

COMMUNICATION AND EDUCATION

The implementation of EBP may require adoption of new products or interventions or involve new systems and processes. Ensuring successful and sustainable change in clinical practice can be time-consuming and costly, therefore it requires careful planning and inclusion of key clinicians and end users of services (Burke and Gitlin, 2012).

It is not just a matter of reviewing the evidence and disseminating information, the evidence has to be appropriate for the clinical setting and useable to improve patient centred outcomes (Burke and Gitlin, 2012).

Communication within teams can be a critical factor for successful implementation of research Irwin et al (2013) highlight that when the workplace becomes busy and the task in hand becomes the priority communication between staff becomes ineffective and leads to inhibited progress in EBP. Communicating with patients and their families can also be challenging as their beliefs, opinions and expectations may differ to what the clinician is able to deliver particularly in the community setting where the nurse is viewed as a guest in the patients home (Hannes et al, 2007). An example of this in clinical practice within wound care is that evidence suggests that using dressing products which support moist wound healing will accelerate epithelial migration (Winter, 1962). However, many patients still prefer to leave a wound 'open to the air' which increases the risk of dehydration and bacterial colonisation of the wound if inappropriately managed (Ousey and Cook, 2011). It is a requirement of the NMC that nurses demonstrate they have maintained their clinical practice, knowledge and competence through continual professional development with appropriate evidential support for revalidation and professional registration (NMC, 2016).

Jones et al's (2007) retrospective four-site study, assessed whether clinical practice was evidence based. They examined 400 records of patients with a chronic wound (three months of analysable data). Data was compared with local evidence-based clinical practice guidelines and protocols to determine adherence in practice. They were able to establish that there were vast variations in practice particularly in relation to wound assessment and dressing selection; wound management products did not meet the needs of the recorded clinical condition of the wound. Despite appropriate guidelines being available, there was a lack of knowledge and skill amongst health professionals and clinical judgement was inconsistent. The authors acknowledge that consistent dissemination of evidence-based knowledge is difficult but necessary, although they do not suggest how this can be resolved. This study focused on wound management practice, but data detailing the status of the health professional treating the wound/patient including qualifications and experience would have added another perspective as to the reason for the variation in practice.

Education of the patient, their relatives and/or carers is a key factor to achieve successful agreement and implementation of evidence-based treatment pathways. Patients may wish to adopt an alternative treatment option despite the nurse's advice or the giving of information (Hannes et al, 2007). It can be challenging to convince patients or their family members that a particular treatment may be beneficial and in fact superior to what they have chosen.

In summary, the literature reflects that the implementation of evidence into practice is complex and requires a collaborative approach which includes organisations, key decision makers, clinicians, researchers, educationalists but most importantly the patient and their families.

The review identifies some of the key barriers to implementing EBP within healthcare, although there is minimal research evidence in relation to barriers to implementing and sustaining EBP in wound care and this is particularly limited when studying community nursing practice. Therefore this study aims to contribute to the body of evidence as well as explore local factors affecting the successful use of evidence-based practice tools.

REFERENCES

Bradley EH, Schlesinger M, Webster T R, Baker D, Inouye SK (2004) Translating research into clinical practice: making change happen. *J Am Geriatr Soc* 52(11): 1875–82

Burke JP, Gitlin L (2012) How do we change practice when we have the evidence? *Am J Occup Ther* 66(5): 85–8 Croft M (2016) *The SPICE Framework.* Available at: http://www.spiceframework.com (accessed 13 August 2018)

Donnellan C, Sweetman S, Shelley E (2013) Implementing clinical guidelines in stroke: A qualitative study of perceived facilitators and barriers. *Health Policy* 111(3):234–44

Dowsett C (2009) Use of TIME to improve community nurses wound care knowledge and practice. *Wounds UK* 9(5):14–21

Drew P, Posnett J, Rusling L (2007) The cost of wound care for a local population in England. *Int Wound J* 4(2):149–55

Dugdall H, Watson R (2009) What is the relationship between nurses' attitude to evidence based practice and the selection of wound care procedures? *J Clin Nurs* (18): 1442–50

Fitzsimons E, Cooper J (2012) Embedding a culture of evidence based practice. *Nurs Manag* (Harrow) 19(7): 14–9

Flodgren G, Rojas-Reyes MX, Cole N, Foxcroft DR (2015) *Effectiveness of Organisational Infrastructures to Promote Evidence-Based Nursing Practice.* Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4204172/pdf/emss-57134.pdf (accessed 13 August 2018)

Funk SG, Champagne MT, Wiese RA, Tornquist EM (1991) BARRIERS: The Barriers to Research Utilisation Scale. *Appl Nurs Res* 4(1): 39–45

Funk SG, Champagne MT, Tornquist EM, Wiese RA (1995) Administrators views on Barriers to Research Utilisation. *Appl Nurs Res* 8(1): 44–49

Gale BVP, Schaffer MA (2009) Organisational readiness for evidence-based practice. *J Nurs Adm* 29(2): 91–7

Gerrish K, McDonnell A, Nolan M et al (2011) The role of advance practice nurses in knowledge brokering as a means of promoting evidence based practice among clinical nurses. *J Adv Nurs* 67(9): 2004–14

Grothier L, Ousey K (2014) Developing pathways to support clinical practice in the identification and management of wound infection. *Wounds UK* 10(4): 34–43

Guest J, Ayoub N, Mcllwraith T et al (2015) *Health Economic Burden that Wounds Impose on the National Health Service in the UK.* Available at: http://dx.doi.org/10.1136/bmjopen-2015-009283 (accessed 13 August 2018)

Hannes K, Vandersmissen J, De Blaeser L et al (2007) Barriers to evidence-based nursing: a focus group study. *J Adv Nurs* 60(2): 162–171

Ho CH, Bogie KM (2007) Integrating wound care research into clinical practice. *Ostomy Wound Manage* 53(10): 18–25

METHOD

Aim

The aim of this service evaluation study was to explore if community nurses experienced any challenges in making clinical decisions using EBP, particularly in relation to wound management and wound infection. A mixed methods approach using used; Morgan's mixed design type labelling was used to obtain quantitative data to assist with establishing an appropriate sample for the qualitative interviews and inform the development of the semi-structured interview questions to further investigate nurses experience (Morgan, 1993).

Ethical approval for the study was sought and granted via the University, as was organisational approval from the author's employer (at the time of this study).

Sample

The study population was chosen due to anecdotal and local incident evidence of inconsistent practice within a geographical area of the organisation. A purposive sample was required to reflect clinical grade, level of education and experience (n=27). Detailed anonymised background information of the individual was captured and further details identifying them to the researcher if they were willing to participate in a face to face interview requested.

From a total of twenty-seven questionnaires, 20 were returned (74.07%). Of the eight nurses who agreed to participate in an interview, seven were chosen based on clinical grade (representative); one left the organisation, therefore six were interviewed. The results of these interviews will be presented in part two. The results from the 20 questionnaires are outlined below.

Data analysis

Quantitative demographic data was analysed and described using Microsoft Excel. Qualitative data were transcribed verbatim and analysed by the researcher using thematic analysis. A descriptive approach was initially used to code the data manually, after which further axial coding was used to identify themes and aid interpretation and analysis of the transcripts (Saldana, 2016).

RESULTS

Participants had been qualified for 6–12 months (n=1), 11–36 months (n=2), 3–5 years (n=2) and over 5 years (n=15). Five respondents had a BSc, one an MSc, nine had a diploma and four had a certificate.

Sixty-five per cent (n=13) were band 5 which, typical of the structure of a community nursing team with the majority of nurses not having a managerial role. The other seven were bands 6 and 7.

To inform the action plan, the training and supervision including formal and informal had been accessed by the respondents had to be ascertained. Questions relating to wound management training (including diagnosis and management of wound infection using the local pathway) were included to establish if training requirements were being met or if specific training was required to increase nurses confidence in their decision making using evidence-based tools. Seventeen nurses stated they felt confident or very confident in recognising the symptoms of wound infection; 12 always used the local wound infection pathway, six sometimes used it, and two, never. This could be due to experience or possibly ritualistic practice.

CONCLUSION

This initial questionnaire was designed to collect demographic and professional information about the participants and to gain background information, assist with the formation of qualitative questioning, and identify participants to take part in semi-structured interviews. Results suggested that 85% of respondents were confident or very confident in recognising the symptoms of wound infection, yet only 70% of the 17 always used the wound infection pathway, and 12% never used it.

The results, although from a small sample, reflect those in the literature, particularly pertaining to individual barriers to implementing EBP.

In order to investigate the reasons why the evidence-based pathway was not being fully implemented, using purposive sampling, six individual interviews were conducted. The results from these interviews are presented in Part 2.