APPLYING GUIDELINES IN CLINICAL PRACTICE

This article aims to highlight the publication of the updated RCN guidelines (2006) for managing people with venous ulceration. The development, uses, and limitations of guidelines will be discussed and the key practice recommendations presented. Guidelines faciliate a systematic approach to assessment and treatment decisions and help provide a framework for documenting care and clinical outcomes.

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Figure 1. A venous leg ulcer over the right lateral malleolus.

This article aims to highlight the recent publication of the Royal College of Nursing *Guidelines on the Nursing Management of Patients with Venous Leg Ulcers* (RCN, 2006).

This article will explain how guidelines are developed and used in practice. The key recommendations of the guidelines will be outlined and the complementary points in the two other national guidelines in the UK will be presented (Clinical Resource Efficiency Support Team [CREST], 1998; Scottish Intercollegiate Guidelines Network [SIGN], 1998). All three guidelines are available online, are reasonably succinct documents and at least one of them should be required reading for anyone involved in caring for people with leg ulcers.

The need for guidelines

It will come as no surprise to hear that within clinical practice there are flaws in documentation and record keeping. Guidelines facilitate a systematic approach to assessment and treatment decisions. This is because they detail the key assessment points to be recorded, the evidence base for treatments which may be used and discuss wider issues to be considered, such as appropriate education for practitioners and patients. It is a great concern that this organised approach does not then translate into a method of tracking assessment and management decisions for the care of patients. It is not clear why this is, as the Nursing and Midwifery Council (NMC) states (2007) that record keeping is a vital part of patient care.

It promotes better communication and

dissemination of information between members of the interdisciplinary healthcare team. It also promotes an accurate account of treatment and care planning and delivery.

It may be that practitioners find record keeping time-consuming, or perhaps some assessment forms are not structured in such a way that assessment and treatment decisions/outcomes are easy to record (NMC, 2007).

This is not just a UK problem; a study investigating the adherence of nursing documentation to leg ulcer guidelines in Sweden found that patient records were unable to demonstrate an audit of the process of care (Ehrenberg and Birgersson, 2003). The authors also concluded that there is a need to establish whether quality of care and clinical outcomes are any different if guidelines are used or not.

Harrison et al (2005) adapted guidelines for use in the Canadian population and established that implementation in clinical practice more than doubled healing rates over a year. However, community nurses involved in the study also completed an 'in-depth' training course and became buddies to other practitioners, and it may have been that the increase in knowledge and skills would have had the same effect regardless of the guidelines. Thomas et al (1998) conducted a systematic review of clinical guidelines and established there was some evidence to indicate that care was more likely to be effective where there were attempts to implement guidelines.

A systematic review is an extensive search for literature on a topic using databases and search engines to seek out as much evidence as possible using key words. Key researchers and other authors are also contacted to identify whether there are other sources of information not yet published. The retrieved literature is then sorted into levels of evidence, for instance randomised controlled trials, non-experimental studies and case studies.

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The RCN guidelines (2006) state that the results of their audit, the Sentinel Audit project (a national audit tool to be used with the 1998 RCN guidelines designed to help with their implementation [Morrell et al, 2001]) demonstrate an increase in concordance with guideline recommendations, an increase in venous leg ulcers healed within 12 weeks (although the actual percentage increase is not specified) and a 35% decrease in costs per ulcer healed.

Dimond (2006) discusses the law in relation to patients receiving care accepted as best practice. She points out that best practice may be difficult to determine where there is confliction opinion and that any decisions made which appear to be contrary to best practice must be fully documented with clear reasons given why this is so.

For instance, a patient may have reduced compression applied because they have chosen this option even after it has been explained to them that full compression may mean their ulcer will heal more quickly. The practitioner would record the information given to the patient and the reasons the patient gives for not choosing full compression. A second example may be that a Doppler assessment of ankle brachial pressure index (ABPI) may not be carried out by the community nurse as the patient has gross oedema. The nurse may record that the patient has been sent for further investigation, or the interdisciplinary team may have decided to reduce the oedema before carrying out the test. The measures for doing this and the subsequent reduction in the lower limb volume would be recorded regularly to document the progress of the patient. Guidelines are key in this situation, they are not meant to be prescriptive but to serve as a basis for consistent and standardised practice. There is evidence that practitioners have difficulty implementing guidelines, despite the view that they are instrumental in changing practice (Marshall et al, 2001).

Development of guidelines

The RCN guidelines were first commissioned in 1996 (McInnes et al, 2000) and then published in 1998. The development team conducted comprehensive and systematic literature reviews, obtained evidence from systematic reviews and other sources of evidence for clinical practice in order to produce a set of recommendations for practice (*Table 1*). The level of evidence is explicit for each recommendation in the guideline:

- I: consistent findings in a majority of multiple acceptable studies
- II: single acceptable study, or weak/inconsistent findings in multiple acceptable studies
- III: limited scientific studies, includes expert opinion.

The different levels of evidence are called a 'hierarchy', or grade of evidence. Randomised controlled studies are considered the highest level and single case studies and expert opinion the lowest. In the RCN guidelines the grades I (highest)–III (lowest) are used. SIGN and CREST use similar definitions of evidence but present it as ABC. For instance, the RCN guidelines state that 'there is no clear evidence of a difference in healing rates between four-layer and short-stretch bandages' (section 2). The evidence level is I as the recommendation is based on seven randomised controlled trials. Section 1 of the guidelines state that the practitioner is to 'examine both legs...'; the evidence level stated is III as this is based on expert agreement but has not been tested by research.

The two other national guidelines (CREST, 1998; SIGN, 1998) use an ABC grading scale broadly encompassing the same definitions. SIGN add good practice points based on the clinical experience of the authors of the guideline. This is designed to help practitioners make clinical decisions. The RCN guidelines discuss the rationale for each recommendation and state the strength of evidence for each but point out that the differences in evidence strength do not mean that any recommendation is stronger than another.

For instance, in the question of who should undertake the assessment, the recommendation is for 'a healthcare professional trained in leg ulcer management'; such as a registered nurse who has undertaken specific training and proved to be competent in the assessment of leg ulcers. While this is unsupported by strong evidence such as a randomised controlled trial, it is supported by surveys which indicate that harm can be caused by untrained nurses and healthcare assistants (McInnes et al, 2000). What is not specified is how a healthcare professional is defined and what constitutes training. It would be helpful to have this definition in an age where trusts are pushing for those without a professional qualification to take on assessment and complex treatment of people with leg ulcers, despite reservations and recommendations for this not to happen from individuals (Anderson, 2006a) and organisations such as the Leg Ulcer Forum (Anderson, 2004).

Coull (2004) questions who is leading guideline development and whether those with proven leg ulcer or tissue viability expertise have enough of a voice in the process.

Patients who have venous leg ulcers often have complicating factors, such as pain or varicose eczema (Anderson, 2006b). Venous ulcers can be very painful, and this can be made worse by oedema, wound infection and irritation to the surrounding skin. Varicose eczema is a common condition associated with leg ulceration. The cause is not clear but is thought to be the result of poor tissue nutrition due to venous hypertension and lack of oxygen to tissue in the lower leg. People with leg ulcers are also more susceptible to irritation from external substances and materials which may come in contact with the skin on the lower leg (Romanelli and Romanelli, 2007).

Robson et al (2006) developed guidelines for the management of venous leg ulcers with the emphasis on medical diagnosis and treatment including surgery. This illustrates the multifaceted care requirements of patients with leg ulcers and the need for interdisciplinary working. Many different professionals may need to be involved in the diagnosis and treatment of a venous leg ulcer,

Table 1

The RCN Guidelines focus on 17 aspects of patient care

Guideline content	Summary of recommendations
Patient assessment	Assessment and clinical investigation should be undertaken by healthcare professionals trained in leg ulcer management. A full clinical history and physical examination should be taken for a patient presenting with either their first or recurrent leg ulcer and should be ongoing thereafter. A list of factors to be recorded is given. Lists are given of elements to record in the following areas: » Arterial disease and other conditions » Factors associated with failure to heal » Wound and lower leg appearance » Clinical investigations required. Bacteriological swabbing is unnecessary unless there is evidence of clinical infection. All patients presenting with an ulcer should be screened for arterial disease by Doppler assessment of ABPI by staff trained to undertake this. Circumstances are given where ABPI should also be conducted, e.g. when an ulcer is deteriorating or failing to heal. This recommendation also states that Doppler assessment should be three-monthly but the text explains the regularity of Doppler for ongoing assessment may be determined by local protocols. The assessor should be aware that the ulcer might be due to arterial disease or other conditions. Ulcers should be measured at first presentation and at least monthly thereafter. Criteria are given for specialist referral, pointing out that referral on the basis of ABPI may vary according to local protocols.
Compression therapy	Graduated multilayer high compression systems (including short stretch) with adequate padding are the system of choice. Currently, there is insufficient evidence to support the routine use of intermittent pneumatic compression as a replacement or adjunct to compression therapy. Any system that can stay in place for a week is likely to be cost-effective. The system should be applied by a trained practitioner. The level of training and the best method of training is unclear.
Pain assessment and relief	Patients should be regularly monitored for pain and have individual pain management plans.
Cleansing of the leg and the ulcer	Cleansing should be kept simple. Irrigation with warm water or saline is usually sufficient. Dressings should be clean; strict asepsis is unnecessary.
Debridement	Removal of necrotic and devitalised tissue can be achieved through mechanical, autolytic, chemical, biosurgical or enzymatic debridement, the impact of debridement techniques on healing is unknown.
Dressing and topical agents	Dressings must be simple, low adherent, low cost and acceptable to the patient. Gauze is not recommended. The most important treatment is compression therapy. Common product categories are considered.
Contact sensitivity	Need awareness that patients can become sensitive at any time. Products containing sensitisers especially lanolin and topical antibiotics should not be used on any leg ulcer patient. Patients with suspected sensitivity should be referred to a dermatologist for patch testing and identified allergens avoided. A table of common allergens is contained in this section of the guidelines.
Skin grafts and skin replacements	Insufficient evidence that skin grafts or skin replacements hasten the healing of venous leg ulcers.
Topical negative pressure	No research evidence that topical negative pressure speeds wound healing generally or venous leg ulcers specifically.
Drug treatments	Pentoxifylline appears a cost-effective adjunctive therapy with compression. No evidence that zinc supplementation, or aspirin improve the healing of venous leg ulcers.
Low level laser treatment	No evidence that low level laser treatment speeds the healing of venous leg ulcers.
Electromagnetic therapy	There is no evidence the electromagnetic therapy increases the healing of venous leg ulcers.
Electrical stimulation	Insufficient evidence that electrical stimulation increases the healing of venous leg ulcers.
Ultrasound therapy	A possible benefit but more research needed.
Prevention of recurrence	Compression hosiery, regular follow up, surgery where appropriate and patient education are recommended.
Education and training	Healthcare professionals with recognised training should cascade their knowledge and skills to local healthcare teams: there is a brief list of what this should encompass.
Quality assurance	Systems need to be in place to monitor standards (there is an audit section www.rcn-audit.org.uk) and your trust may be taking part in the national audit — ask your TVN/leg ulcer specialist nurse

Note: practitioners need to read the whole guideline document and take note of their local guidelines and care pathways where present

e.g. nurse, vascular surgeon and vascular scientist. Rycroft-Malone et al (2004) argue that there is leeway to include other forms of evidence in clinical practice making the point that sometimes the criteria for acceptable evidence is set too high with the result that evidence based on clinical experience can be excluded. Practitioners and researchers must always try to address any gaps in knowledge but this takes time to develop. The challenge remains that there has to be a consensus on this evidence and how it is translated into practice.

The updated guidelines

The 2006 RCN guidelines encompass any new evidence published in the intervening years from the 1998 edition. The key differences in the updated guidelines include:

- The 2006 document does not have a summary page with the recommendations
- Addition of factors associated with failure to heal
- Statement on intermittent pneumatic compression therapy (IPC) added
- Statement that the level of training and the best method of training is unclear for compression therapy
- EMLA© cream, a topical anaesthetic, is an effective treatment for leg ulcer pain caused by procedures such as debridement
- Patients with healed ulcers should be encouraged to wear class III hosiery if they can tolerate it, otherwise the highest level they will tolerate
- More detail on dressings, including avoiding the use of gauze, and cost-effectiveness. Evidence to support the use of various categories of dressing is also considered
- Sections have been added on skin graft/replacements, topical negative pressure (TNP), drug treatments, low level laser electromagnetic therapy, electrical stimulation and ultrasound therapy (*Table 1*).

All three national guidelines broadly agree on what is included (Lorimer et al, 2003) with some minor differences in emphasis.

CREST

The CREST guidelines recommend taking a biopsy of atypical ulcers and non-healing ulcers while the RCN recommendation is based on atypical site and appearance. CREST provide more detail on skin care and recommend a specific leg ulcer series for patch testing. The guidelines also state that each general practice unit or primary healthcare team should have access to an identified nurse professional with a specific interest and training in leg ulcer management.

The CREST guidelines also state that properly supported leg ulcer clinics improve outcomes. They include a glossary of terms and a sample assessment form.

SIGN

The SIGN guidelines contain the same recommendation as CREST related to taking a biopsy. SIGN also include a statement that hosiery should be continued for at least five years. The practice point adds that this will probably have to continue indefinitely unless the patient has had corrective vascular surgery.

The three national guidelines all broadly agree on the principles of assessment and management of patients with venous ulceration. The differences are minor and it needs to be borne in mind that the RCN guidelines are based on a more up-to-date review of available evidence. SIGN and CREST may be similarly updated in the future. It is also important to consider local policy and guidelines.

Beyond the guidelines

McGuckin et al (2002) suggest that guidelines developed by a professional body have 'wiggle room' and are deliberately non-controversial. Guidelines may need to be adapted to suit local circumstances (Marshall et al, 2001) and, indeed, the RCN guidelines refer the reader to local policy at various points.

Expert practitioners, such as leg ulcer specialists and tissue viability nurses may go beyond guidelines and this may in part define expertise (Christensen and Hewitt-Taylor, 2006). Experienced practitioners may have to work outside guidelines in order to meet individual patient need. It is vital that this is documented, and that managers and colleagues are aware that this is the function (and limitation) of guidelines. They are not a list of instructions but broad

recommendations that try to encompass the 'normal' situation. The challenge in managing people with leg ulcers is that the underlying condition and the experience of living with an ulcer and its treatment is often very complex. Christensen and Hewitt-Taylor (2006) highlight that the expert nurse may be seen as a relatively expensive resource and their value needs to be articulated, otherwise they will be replaced by prescriptive guidelines for staff who may be 'technically proficient' but unable to apply the individualised expert care required by some patients. There is a need for expert nurses to prove what they do and challenge the views of outcome measures.

Outcome measures focus only on monetary value. An outcome measure is the result of what has been done to the patient. Measures may include cost savings, time to healing or oedema reduction. Other less tangible measures may include improvement in the well being of the patient, developing partnerships with patients and pain reduction, which may be extremely important to the patient but more difficult to present as cost savings.

Guidelines may be seen as a lower level than that 'expertise' but Christensen and Hewitt-Taylor do not suggest that expert practitioners ignore guidelines, but that they are used to underpin and inform the care given to patients. Of course any digression from the guidelines must be fully documented with the reasons why and the outcomes.

It is clear that there needs to be guidance on risk factors for development and progression of arterial disease so that resources are used judiciously and that those at risk are identified and prioritised for monitoring.

One example of where there may be local adaptation and variations in practice is in the length of time between Doppler reassessment of ABPI. The evidence for this is based on one study of 55 patients. In recent years the recommended practice of three-monthly Doppler assessment post-healing has been questioned (Vowden, 2003; Pankhurst, 2004) as being resource heavy, unnecessary for many patients as they may not ever develop arterial disease, and unsustainable in practice due to heavy workload and poor staffing levels. It is clear that there needs to be guidance on risk factors for development and progression of arterial disease so that resources are used judiciously and that those at risk are identified and prioritised for monitoring. The RCN guidelines do direct the reader to local policy.

Future research

Any researcher (or potential researcher) only has to look at the areas in the guidelines where the evidence is weak to find ideas for studies which need to be conducted, so that the evidence for managing people with leg ulcers becomes much more robust. The section on assessment discusses patient consideration and reminds the reader about the quality of life aspects of living with ulceration. Issues such as patient concordance are discussed briefly but clearly there needs to be more research on this to understand the challenge from the perspective of the patient and the practitioner so that partnerships can be used effectively in patient care.

The current national guidelines are concerned with venous leg ulcers and many patients have much more complex aetiologies. The Leg Ulcer Advisory Board devised a treatment pathway mainly focused on compression therapy (Marston and Vowden, 2003) but which gives useful guidance for managing mixed aetiology ulcers and referrals to specialist vascular services. There is a need for a more structured national approach to managing these complex patients.

Conclusion

Just delivering evidence to practitioners is unlikely to make much difference to clinical practice (Rycroft-Malone et al, 2004), rather it is the dissemination of the evidence/guidelines and the visible use of them in practice which will make the difference. Find out where your guidelines are, access them and look to see how clinical decisions match what is in the guidelines. If you have local guidelines investigate

the similarities and differences with national guidelines and consider the evidence base for your local document. Look also to see if documentation of care explains clearly why decisions have been made and what the outcomes are. Guidelines are not meant to be prescriptive but they do offer a systematic and evidence-based approach to care which can only serve to benefit patients. **WE**

Key Points

- **At least one of the three national guidelines should be read by all practitioners involved in the care of people with leg ulcers.**
- **Care is more likely to be effective when there are attempts to implement guidelines.**
- **Guidelines are not meant to be prescriptive but to serve as a basis for consistent and standardised practice.**
- **Guidelines may need to be adapted to suit local circumstances.**

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