

We have the evidence to improve venous leg ulcer outcomes: How do we get this evidence into practice?

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ABSTRACT

This article will briefly discuss variation in practice, and the difficulty of implementing evidence into practice across the health sector broadly, and more specifically related to venous leg ulcers (VLUs). An overview of the issues related to implementation of evidence into practice will be provided, with suggestions that a clinical registry can be one tool to support the systematic uptake of evidence into practice in the care of people with VLUs.

Keywords: venous leg ulcers, evidence-based practice, knowledge translation.

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BACKGROUND

Appropriateness of health care delivery in the community

While implementation of best practice has shown improvement in health outcomes¹, actual practice is considerably less concordant with evidence-based recommendations and, as a result, patients fail to benefit optimally from advances in health care^{2,3}. American adults received "recommended care" only 55% of the time in the years 1999–2000⁴. A similar study in Australia showed that adult Australians received appropriate care at 57% of 35,573 eligible health care encounters³. Between 20% and 30% of clinical interventions may be unnecessary or even harmful on the basis of current evidence⁵. This results in poorer quality of life and loss of productivity, both personally, and at the societal level².

Issues with quality of care have been identified in the US since the late 1990s, and multiple innovations have been developed and piloted; however, uptake of these in the clinical setting have been extremely problematic. This is linked to⁶:

1. The nature of the work being of high uncertainty, with risk of fatality and clinician discretion being very important.
2. The workforce is highly hierarchical, with strong professional identification and weak organisational identification.
3. Managers and clinicians have perceived conflict of goals.
4. Lack of performance measures and lack of reward for improving care and outcomes.

Current information on care of venous leg ulcers in Australia

Chronic venous disease affects 2% of the western population^{7,8}. One in five patients with chronic venous disease suffers venous leg ulceration (VLU) and due to the nature of the condition patients often endure recurrent episodes⁹. Venous leg ulcers (VLUs) represent the most common chronic wound problem seen in the community in general practitioner (GP) practices¹⁰. The prevalence of this condition increases with age, with Australian figures showing 3% of people aged greater than 65 years have a chronic leg ulcer¹¹. Fifty per cent of all patients with VLUs heal completely within three months following best practice, and 70% of the cases within one year¹². Many of these wounds fail to heal in the expected trajectory, resulting in significant morbidity to individuals and cost to the health system¹³.

Unfortunately, like many other health conditions³, wound care practice internationally does not reflect research evidence, with significant deficits identified^{14,15}. Specific issues include a lack of confirmed wound diagnosis in many clients; fewer clients than expected having appropriate assessments as recommended by clinical guidelines; monitoring of wound progress being done less than expected; and fewer clients having management as recommended by clinical guidelines¹⁶.

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A KPMG 2013 study commissioned by the Australian Wound Management Association identified that the VLU treatment in Australia currently involves a variety of treatment provider arrangements across a number of jurisdictions¹⁷. The study showed that there was variable compression therapy use, with community nurses using compression from 17–100% of cases, and GPs from 0–50% cases. There was limited data available on healing times in Australia¹⁷. The costs of treating VLU in Australia were estimated to be, on average, \$6109 per person per wound in 2012–2013¹⁷; however, if compression therapy was used, this cost reduced to \$2926¹⁷. It is estimated that VLU patients over 60 years of age pay approximately \$27.5 million in out-of-pocket costs for consumables per year, equivalent to 8% of total treatment costs¹⁷. It was estimated that using compression to treat 100% of diagnosed VLU patients would result in:

- total savings of \$166.0 million in 2012–13
- savings for out-of-pocket consumable costs of \$10.5 million in 2012–13¹⁷.

Reduced treatment time and associated labour costs, reduced consumable costs, and avoided hospitalisation are the primary drivers of the total saving¹⁷. The savings for out-of-pocket consumable costs are primarily driven by reduced healing times, the frequency of treatment application, and the proportion of total consumable costs paid by patients across jurisdictions¹⁷.

CURRENT AVAILABLE EVIDENCE TO GUIDE PRACTICE

While there is great variation in practice, there are many clinical practice guidelines and systematic reviews highlighting what is best practice in many different health issues. NHMRC alone issued 61 new guidelines and standards between 2009 and 2012.

For VLU, there are a number of clear, evidence-based, clinical practice guidelines in:

- Assessment
- Diagnosis
- Management
- Prevention of recurrence
 - For example, AWMA¹⁸, SIGN¹⁹

Therefore, the issue in appropriately managing this clinical problem doesn't appear to lie in the lack of evidence. Further, it is known that implementing evidence-based care is significantly related to improved healing outcomes^{20,21}. Therefore it is known that by following the evidence, care is more efficient and effective. This begs the question: Why isn't evidence implemented in practice? This leads to asking another question:

How do clinicians translate new knowledge into specific clinical actions that they adopt into practice?

a. Current thinking

Published evidence does not automatically diffuse into clinical practice²²; however, currently the clinician is often left on his/her own to “just do it”²³. It appears that the thinking is this:

Figure 1: How evidence might get into practice



b. Reality

Evidence uptake requires an active process of translation²⁴. It is a complicated process, so much so that a new science has been developed on this topic called implementation science²⁵. There is much research being done in this area that indicates that a raft of processes are required, depending on many factors, and that it is very complex²⁶.

For the purposes of this paper the processes will be summarised to facilitate the uptake of evidence into practice following Lavis *et al.*'s²⁷ method of asking five key questions:

1. What should be transferred?

The basis of the information to guide practice must be of the highest quality; therefore, up-to-date systematic reviews or other syntheses of the global evidence is recommended, to generate clinical practice guidelines²⁷. Of note is that these systematic reviews and guidelines are invariably cumbersome, and are not applicable to a wide variety of settings²⁸; therefore, not only should the information be based in sound evidence, it must also be presented in a form that is appropriate for those using them^{29,30}. This in itself requires people with specific skills to be able to transform the evidence to a form that can be readily utilised into practice³¹.

2. To whom should research knowledge be transferred?

This varies depending on the type of research being translated. For example, if there is clinical research demonstrating harm of treatment, then national policy makers (including regulatory bodies) and industry must be made aware of this information in order to prevent harm to the population²⁷. If there is clinical research demonstrating benefits from treatment, then a wider audience should gain access, such as patients, health care practitioners, local administrators, national policy makers, and industry²⁷.

3. By whom should research knowledge be transferred?

This depends on the target audience and research knowledge being transferred. Effort must be expended to identify the most appropriate

vehicle through which the knowledge should be transferred³². It may be an individual, such as a health care provider, researcher, or consumer. Or it may be a group, an organisation, or through the health care system (via access to resources being made available on websites or other forums).

In order to transfer knowledge, the source must have credibility with the target audience, possess the skills and experience needed to transfer the research knowledge at hand, and have time and resources to do so³¹.

4. How should research knowledge be transferred?

To effectively implement evidence into practice, a systematic sequence is required, including over a dozen steps³³. Most of these steps are necessary before implementation begins, to build capacity within the system, organisation and individuals. The most effective outcomes have been achieved through the combination of multiple activities which may include assessment, negotiation and collaboration, organised planning and structuring, personal reflection and critical analysis³³. In addition, it is important to identify barriers which are modifiable and non-modifiable. The following barriers have been shown to significantly affect the uptake of evidence:

- Organisational culture⁶: This includes aspects such as lack of leadership commitment, lack of middle management engagement, lack of ownership and lack of equitable resourcing for people, process and technology.
- Operational barriers^{6,34}: These include poor knowledge management processes; lack of appropriate technology and skills; issues with the scope of the content (eg. too large, inadequately representative); no culture of continually learning and incorporating the needed and accessible knowledge into practice; and the physical layout of the work environment does not match the collaborative intent of the strategy.
- Individual barriers: These include factors such as resistance to the sharing of knowledge at the individual level; perception that it's not convenient to implement; end users don't know what they know; end users don't know the value of what they know; the belief that knowledge hoarding is job security; individuals are given no credit to make changes; there is no time allocated for change in practice³⁴.



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The specific barriers to evidence-based practice that have been identified in the area of wounds are:

- A lack of information and skills³⁵.
- Difficulties with access to evidence-based guidelines³⁶.
- Lack of reimbursement associated with specialist wound care and treatments such as compression bandaging³⁵.
- High cost of care^{36,37}.
- Limited access to specialist multidisciplinary teams³⁸.
- Poor communication³⁵.

Once barriers have been identified, then appropriate interventions to address overcoming barriers and supporting enablers is necessary³⁹. Identifying potential adopters and practice environments; and prioritising which barriers to target based upon consideration of 'mission critical' barriers is important⁴⁰.

There are numerous strategies that have been developed and used in the past. Some of them include⁴⁰:

Professional behaviour change strategies:

- Printed educational materials
- Educational meetings
- Interactive and participatory approaches
- Educational outreach
- Local opinion leaders
- Reminders
- Audit and feedback
 - Relates to any summary of clinical performance of health care over a specified period of time to change health professional behaviour
- Tailored interventions
- Multifaceted interventions.

Strategies focusing on consumers, including interventions to:

- facilitate communication and/or decision-making
- support behaviour change, and
- inform and educate.

Strategies focusing on policy makers and senior health service managers:

- Increase interactions between researchers and policy makers.
- Research to match beliefs, values, interests, or political goals and strategies of elected officials, social interest groups, and others.

5. *With what effect should research knowledge be transferred?*

This varies across different stakeholder groups. For health care professionals, value is placed on practice that is more evidence-based, observable and influences changes in professional behaviours and quality indicators. For policy makers, it is important to understand that consideration of research evidence is a key component of their decision making, but recognise that there are other legitimate factors. For example, decisions are made based on the policy context, values and preferences of individual patients. Therefore, rather than being evidence-based, it will likely be evidence-informed.

Clinical registry: a way to reduce variation in practice and improve quality of care

Continuous improvement should be based on ongoing monitoring of the appropriateness of care⁴¹. A clinical registry is one effective approach⁴²:

- It provides a summary of clinical performance of health care over a specified period of time, and
- Can be used to change health professional behaviour.

Developing and implementing a VLU registry may be one way to reduce variation in practice, and encourage health care providers to implement evidence-based practice.

CONCLUSION

There are significant variations in practice in assessing and managing people with VLUs, despite the robust evidence for assessment to diagnose, and effective care using compression therapy. The implementation of evidence into practice is a complex process that does not happen without planning and support. To date, there has been little support for evidence-based assessment, diagnosis and management of people with VLUs, resulting in poor patient outcomes and high costs. One strategy that will likely contribute to reduced variations in practice and improved patient outcomes is feedback and audit through a clinical registry. Another article within this issue discusses clinical registries in detail.

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