

# A community of practice as a model of nurse-led wound prevention and management

Monaro S, White M & West S

## ABSTRACT

Wound management appears to be evolving as a discrete specialty. Currently, wound management is not aligned with the predominant medical model, making its 'fit' into the current health care system problematic. This paper describes a nurse-led wound model of care which developed from a community of practice (CoP). It involves multiple clinical nurse consultants (CNCs) embedding both wound prevention and management as part of their specialty practice, while ensuring regular contact with each other to maintain a CoP and support the model of care. We believe this model works well in a large, metropolitan teaching hospital with enhanced outreach into the community setting by specialised nurse clinicians who are key members of interdisciplinary teams.

*Keywords: Community of practice, wound prevention, wound management, clinical nurse consultant, interdisciplinary team.*

## INTRODUCTION

The perception that wound prevention and management has become increasingly complex over recent decades is supported both by clinical experience and any survey of the relevant literature. There are current mandates for health care organisations to ensure clinical governance in the context of increased patient acuity and patient flow<sup>1</sup>. As a consequence of the increasing complexity, health care organisations have become interested in the development and employment of wound care nurses (WCNs). It is a role that is also

becoming popular in extended and community settings, where the complex wound is part of the 'ageing' and chronic disease case mix, and avoidance of further acute care admission is desirable. In the current health care climate, as exemplified by a recent joint position document<sup>2</sup> proposing serious consideration of managing wounds as a team, such health care systems-based initiatives for effective wound management will also need to grow in size, complexity and interconnectedness, as the need to rationalise finite resources increases. However, as Dutton *et al.*<sup>3</sup> have established in their recent integrative review, the role of the WCN needs to be better articulated in terms of its context, scope of practice and impact. This lack of role clarity may also be an outcome of the considerable variation in both description and function of these roles across the health care system. While establishment of a specialist WCN position may work in some organisations there are also numerous limitations, in particular the risk of fragmenting care and deskilling the broader nursing workforce<sup>3</sup>.

In the mid-1990s, an alternative multispecialty model wound service began to develop following a number of severe, hospital-acquired pressure injuries that highlighted the need for a proactive approach to wound prevention and management. Recognising the benefits of a coordinated, whole-of-hospital approach to wound prevention and in response to the growing number of complex wounds they were being asked to manage within both acute and community settings, four clinical nurse consultants (CNCs) from the vascular, stomal therapy, surgical and burns areas initiated this multispecialty model. Following an initial meeting to discuss strategies for 'up-skilling' the clinical nursing workforce to address wound prevention and management; the group formalised and became known as the Wound Advisory Group (WAG). The WAG has now expanded to include key clinicians from 11 other clinical specialties and meets regularly to work collaboratively to develop consistency and

### Susan Monaro \*

RN, BAppSc (Nursing), MN, PhD(C)  
Vascular Clinical Nurse Consultant  
Concord Repatriation General Hospital Concord  
Clinical Lecturer, Sydney Nursing School  
University of Sydney, NSW  
Tel: +61 (2) 9767 5000 Page: 60255  
Email: monaros@email.cs.nsw.gov.au

### Megan White

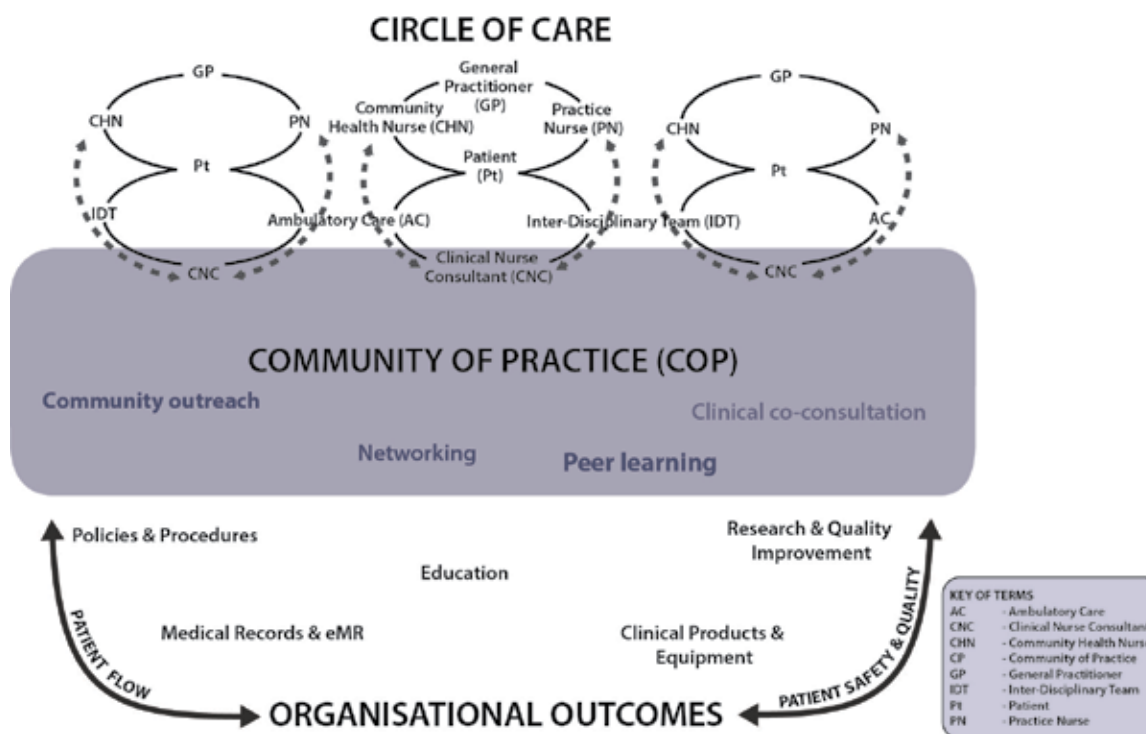
RN, BAppSc (Nursing), MN  
Orthopaedic Clinical Nurse Consultant  
Concord Repatriation General Hospital Concord  
Clinical Lecturer, Sydney Nursing School  
University of Sydney, NSW

### Sandra West

RN, RM, PhD, BSc, Int Care Cert, FRCNA  
Associate Professor of Clinical Nursing  
Sydney Nursing School, University of Sydney, NSW

*\*Corresponding author*

Figure 1: The WAG model



clinical expertise for variable case mix and for the broader nursing workforce.

As a consequence of WAG activities, rather than being seen as the sole focus of a WCN, wound prevention and management have been incorporated as essential responsibilities of multiple CNC position descriptions. This shared responsibility model has also provided an opportunity for developing a “community of practice” (CoP)<sup>4</sup> focussed on the prevention and management of complex wounds. A CoP, as conceptualised by Wenger<sup>4</sup>, is a group of people with similar interests and shared concerns practising within a field where frequent interaction between members enhances the collective learning of the group. This type of “community” has helped to recognise and value such learning in many complex, modern clinical contexts. Another example of a CoP has been the development of a statewide Intensive Care Unit (ICU) Collaborative<sup>5</sup>. Recognition of the WAG as a CoP has allowed development of a tiered model of response to wound management, which supports access to both horizontal and vertical sources of advice for complex issues, along with ensuring immediate and consistent responses to less complex or more frequently seen wounds within all clinical specialities. This paper describes the model and the evolving role of the WAG CoP in contributing to patient care and organisational outcomes of patient flow and the safety and quality of that care.

## THE WAG MODEL OF CARE

Figure 1 provides a schematic of the WAG model of care that demonstrates the centrality of the CoP along with the intersecting circles of care that extend to support clinical care delivery in inpatient, ambulatory care and community settings, and the

contributions the CoP makes to broader organisational processes relating to the prevention and management of wounds. The WAG CoP, the circles of care extending from it, and the organisational processes it engages with will now be explored.

### 1. The community of practice (CoP)

There are three primary functions of the CoP: networking, peer learning and clinical co-consultation and another developing area of activity — community outreach.

Networking occurs on a number of levels with each CoP member engaging individually with other CNCs and more broadly with the group as a whole — a primary purpose and outcome of the WAG model. CoP members also network within their area of specialty practice at district, state and national levels, providing information and ideas for improvements in care for specific patient populations that are then shared with the CoP. Networking with various wound product and equipment companies is also necessary as CNCs attempt to keep their knowledge of products current. The CoP now facilitates bimonthly meetings with various external agencies to maximise the value of these networking opportunities but also to limit the disruption to the CNCs’ clinical workload. This multilevel networking within the CoP therefore results in information sharing and peer discussion of appropriate treatment options for complex patients.

CoP members initiate opportunities for peer learning in the development of advanced skill sets in all areas of their practice including wound prevention and management. The support provided by other experienced CoP members with the ability to adapt wound

practice and support skill set development also allows opportunities for less experienced nurses to backfill CNC leave. In this way, the CoP is also assisting with enhancing the workforce through a dedicated, specialised team approach. Generally, each CNC is able to manage most wound prevention and management situations; however, if a patient has a complex wound and a CNC feels it is beyond the scope of their practice, a WAG co-consultation with a CNC who has experience with more complex wounds is organised. Many of these co-consultations involve CNCs from the vascular, orthopaedics and plastics areas, where patients with severe wounds requiring complex care involving adjuvant therapies such as compression therapy, traction and splinting and/or extended skills such as procedural pain management, negative pressure wound therapy (NPWT) and conservative sharp wound debridement, are more frequently encountered. This approach not only means that the patient is assessed thoroughly and managed comprehensively, but also provides an opportunity for peer learning in a supportive environment.

The benefits of CNCs including wound management as part of their case load are also evident in the management of geriatric patients with complex wounds. Effective wound management for this patient group frequently requires access to a number of specialist services such as vascular surgery, dermatology and infectious diseases. Clinical co-consultation involving CoP members and senior geriatric nurse clinicians working with geriatric patients with complex skin or wound problems have been useful in decreasing length of inpatient stay for this group.

The WAG model has also facilitated peer learning for advanced practice nurses working in a range of community-focused geriatric services. For example, the aged care services in emergency team and the residential aged care facility (RACF) outreach service, which use a geriatric model of care that aims to support managing the patient with a complex wound (or other health issue) in their home or RACF rather than through admission to hospital.

## 2. Circles of care: CNCs, patients and interdisciplinary teams

Under the WAG model, the preferred approach to wound management is for the patient and their wound to be managed by the CNC from the clinical specialty under which they are admitted. Each circle of care (Figure 1) therefore centres the wound care needs of an individual patient within the team-based processes of care. As CNCs are pivotal members of each patient's interdisciplinary team (IDT) the direct involvement of the specialty-based CNC means that the patient is managed holistically, with information about the wound and its care being made known to all members of the IDT, discussed on rounds, at handover, and in case and family conferences (as illustrated in Figure 1). Such integration of wound-related care is difficult to achieve in the 'stand-alone' WCN model, unless the WCN is present at all such encounters with the IDT. The specialty-based CNC can achieve a deeper understanding as opposed to a broad but shallower level of understanding across a number of specialty areas and is better able to assess and address the needs of the patient. The WAG model approach, therefore, not only facilitates effective clinical decision making but also decreases the

time taken to deliver expert wound care and discharge planning is commenced from point of entry.

The WAG model of care also facilitates strong connections with medical/surgical consultants. Such interprofessional relationships facilitate expediency and efficiency of clinical decision making in relation to specific wound products and practice, and patient information, but are difficult for the stand-alone WCN to maintain. In addition, patients and carers often see the CNC as their link back to the medical/surgical team, and are reassured by knowing that if problems arise, expert nurses are able to talk directly to the whole IDT, including their medical/surgical consultant. The WAG model also means that while CNCs with extensive wound care experience are available for clinical co-consultation, other specialty-based CNCs have a high clinical profile, both within their own units and throughout the hospital. This is due to their role in the management of outlier patients<sup>6</sup> (patients admitted to a bed outside the 'home' ward of that specialty) and their direct involvement in patient care within the emergency department and ambulatory care.

Both the orthopaedic and vascular surgery areas, which have a significant number of outlier patients, illustrate the operational usefulness of the circles of care. These outlier patients are the result of a long-standing initiative to exclude patients with multiresistant organisms (MRO) from the "clean" orthopaedic and vascular wards. This initiative was instigated 20 years ago by the infectious disease department when co-location of these clean and contaminated cohorts was contributing to prosthetic infections (orthopaedic hardware and vascular grafts). All admissions are screened for the presence of MROs and, if positive, are excluded from the clean wards; however, a large proportion of the outlier patients have wound-related complications and require complex wound management. The orthopaedic and vascular CNCs work within the IDT to ensure that outlier patients receive the specialised wound care they require, even though such care may be unfamiliar to the nurses working on the wards where patients have been admitted. The holistic approach of these CNCs rather than the more fragmented care provided by a WCN, means that all aspects of patient care can be simultaneously and comprehensively addressed.

The CNCs are involved in engaging the patient and the family as they often follow patients through the continuum of care. The circle of care extends out to care providers in the community, including general practitioners, practice nurses and community nurses. Involvement ranges from liaison with these providers by phone or email to closer monitoring of complex patients through ambulatory care clinics.

## 3. Organisational outcomes

The increased wound prevention and management expertise within the broader nursing workforce that the WAG Model has facilitated enhances the quality of care throughout the organisation by increasing the likelihood of patients receiving evidence-based,

Table 1: Quality improvement projects

Quality improvement project	Goal	Outcome
Risk assessment audits <i>Pressure injury</i> <i>Venous thromboembolism</i>	Monitor risk assessment compliance and accuracy	Early identification and risk reduction
Equipment audits <i>Operating room pressure injury devices</i> <i>Base mattresses</i>	Monitor equipment range and standards	Pressure injury reduction Manual handling compliance
Bundles of care audits <i>Pressure injury prevention</i> <i>Negative pressure wound therapy</i> <i>Graduated compression therapy</i>	Measure if patients are receiving all components of clinical care	Quality of clinical care Data for mapping improvements
Medical record audits <i>Wound management</i> <i>Discharge documentation for patients with pressure injuries</i>	Measure standard of clinical notes and use of medical records for wound management	Continuity of care Medico-legal requirement

coordinated wound prevention and management. CoP members are also central to the effective organisational management of patient-flow between specialty and subacute units, for example, rehabilitation and palliative care units, and the hospital and the community, which may involve many settings and agencies hospital in the home, ambulatory care, mental health, general practice and residential aged care facilities. The specific organisational outcomes the WAG model supports are identified in Figure 1 and discussed below.

#### **a. Research and quality improvement**

Since the early 1990s, the hospital has engaged in Pressure Injury Point Prevalence Auditing (PIPPA) and the WAG CoP has also played a very active role in engaging clinicians with collection of the data and the identification of areas where pressure injury prevention could be improved. As a consequence of the PIPPA work, the WAG CoP has developed a shared understanding of the importance of auditing and feedback and has been instrumental in addressing the feasibility of meeting the demands of (by recruiting and training auditors) and coordinating many labour-intensive audits. Over time, the CoP has also acted as the repository of the shared knowledge involved in the conduct of these important quality improvement processes. WAG CoP members have therefore been instrumental in the planning and execution of a number of quality improvement activities for high-risk patient groups, the goals and outcomes of which are provided in Table 1.

#### **b. Education**

The WAG CoP strong emphasis on professional development through education is demonstrated by its involvement with the development and delivery of courses on wound management and prevention by CoP members and other clinical experts. To avoid the deskilling of nurses in relation to wounds and to support them in managing simple through to complex wounds (depending on their level of clinical expertise), while being able to identify when they need to seek the input of an expert, the CoP members have proactively contributed to a range of Local Health Area District-level hospital-based educational initiatives addressing general topics such as compression therapy, wound cleansing and debridement, and wound photography, and more specialised wound care topics tailored to the needs of nurses working in vascular, orthopaedics, burns, gastrointestinal surgery, and palliative, aged and rehabilitation care areas.

These courses are now supported with a dedicated educator and a CoP supported working party to determine learning objectives and develop shared teaching resources. These resources are reviewed annually by the working party and to achieve efficiency and consistency the educator then circulates the resources and updates the shared digital repository.

A need for competency-based assessment across a range of skills to ensure that the clinical workforce meets a minimum standard of care was also identified. In response, the WAG CoP developed

Table 2: Medical record forms

Indication	Medical record form
Adult pressure injury risk assessment	Waterlow Pressure Ulcer Risk Assessment Tool and interventions
Detect foot problems	Foot screening tool
Wound assessment and management	Wound assessment and treatment plan
NPWT assessment and management	NPWT pathway
Compression therapy	Graduated compression therapy authority
Surgical drain management	Drain chart
Pressure injury progress	Pressure Ulcer Scale for Healing (Push Tool)
Imaging of wounds by clinicians	Clinical imaging and audiovisual consent form

and maintains a series of assessments to determine competency in a range of skills such as NPWT, compression therapy, wound cleansing and debridement, wound photography and procedural pain management, which are now used in courses or available as a ward-based “Top 10 Skills” for induction of new staff.

In addition, the CNC contributes to both junior medical staff and registrar training. This is achieved via a number of modalities: in-service sessions; rounding with the team to plan wound management; additional clinical reviews and care delivery; and communication with IDT and patient/carers. In all of these type of encounters there are incidental opportunities for learning clinical and patient/carer engagement skills.

### c. Policies and procedures

The WAG CoP has worked to publish and update consensus policies, procedures and guidelines incorporating literature-based determinations of best practice in wound prevention and management. The systematic approach needed to achieve time efficiencies when analysing literature and revising documents in this area are well embedded within the WAG CoP. This work was made possible when one member of the WAG CoP was given organisational support through a dedicated, part-time position to coordinate pressure injury prevention across an 11-hospital network. An extension of this was the coordination of multiple policies and procedures with current documents available addressing:

- skin integrity assessment and maintenance — skin, foot, skin tear and pressure injury
- wound assessment and management — probing, cleansing and debridement, wound swab collection, wound procedural pain, NPWT, and graduated compression therapy.

### d. Clinical products and equipment

The range of wound products and devices available for use within

acute care clinical settings continues to expand. The majority of products used by WAG CoP members are made available through a statewide purchasing contract and WAG CoP members are involved in ensuring that cost-effective products are readily available at the point of care. To ensure that the product range meets patient and clinician needs, but at the same time avoids duplication of purpose and clinical confusion, WAG CoP members in conjunction with the clinical products unit conduct regular reviews of the range of available wound products.

The trialling of new products is also co-ordinated to optimise time efficiency. Opinion about trial products and recommendations for product introduction or changeover is sought at regular intervals from the WAG CoP members. New products are presented at a structured meeting, which streamlines industry representatives' access to clinicians, saving valuable time for both parties. This coordinated approach has resulted in a comprehensive but standardised product range with focused education to support products and a coordinated implementation and roll-out process when new products are introduced. The benefits of this approach were demonstrated by the establishment of a hospital-wide coordination of care process for the implementation of NPWT, which was able to promote appropriate initiation and cessation of therapy through a linked approach involving operating theatre, ambulatory care and the community.

### e. Medical records and eMR

As detailed in Table 2, the WAG CoP has since its inception developed several medical record forms to capture clinical information to enhance documentation related to wound prevention, assessment and management. The scope of work for the WAG CoP has, however, expanded as paper-based medical records transition to the electronic medical record (eMR) with members contributing to the development of several wound-specific electronic modules.



## DISCUSSION

Nurse-led specialty wound care is known to contribute to improving patient care<sup>7</sup>. In the WAG model the responsibility of wound prevention and management sits with the interdisciplinary admitting team and the specialty CNC is the first referral point within their specialty for patients with complex wound prevention and management needs. The current high levels of acuity of patients, high occupancy, and the speed of patient flow in acute care settings necessitates high-quality care that needs to be supported by a clinical expert who is visible and accessible. The WAG model of wound care assists in this process by making more of these expert nurses available and accessible to both patients and nurses working within a wide variety of ward and community-based areas of care provision.

We believe that the WAG CoP encourages nurses to think critically, learn knowledge and skills, and provide better care. This has contributed to improved outcomes for patients through enhanced wound prevention and management, and consequent improvements in patient/carer satisfaction. Quantitative assessment of these frequently multifactorial improvements is problematic, although we believe documented decreases in pressure injury prevalence and incidence are direct reflections of the WAG model. The WAG CoP is keen to demonstrate other impacts of the model through more focused research.

Visibility of and access to a large number of specialty CNCs means that the CNCs can act as knowledge brokers and role models in promoting evidence-based practice among clinical nurses and the broader team<sup>8</sup>. Our model means that we have the CNC WAG CoP to connect and teach knowledge and skills to a large workforce with significant turnover. The integrative review by Dutton *et al.*<sup>3</sup> confirmed that the use of WCNs is one model of care that lends itself to case-management or care coordination. However, we believe that in the complex health care system, and in both hospital and community settings, the level of case-management and care coordination achieved by the WAG model of wound care improves support for patients, carers and clinicians.

In addition to specialist nurses, there have been links established with other disciplines involved in wound management in both inpatient and outpatient settings. In particular, this includes the podiatrists who support an ambulatory care high-risk foot service, and occupational therapists who coordinate hand therapy and compression therapy for patients with burn injury, venous hypertension and lymphoedema. An identified need is the better linking of these disciplines across all settings, as clinical services extend into hospital, in the home, residential aged care outreach and telehealth. The inclusion of a dietitian is also critical to enhancing wound prevention and management. Each specialty nurse links with allied health and is a key contributor to interdisciplinary team meetings and rounds.

There is also a link between the WAG CoP and the Patient Safety and Quality Unit which has traditionally coordinated monitoring

of indicators relating to wound prevention. The National Safety and Quality Health Service Standards<sup>9</sup>, in particular standard 8, highlight pressure injuries as a key area of patient safety. This has necessitated an in-depth understanding of the multiple variables relating to risk assessment and reduction and how to measure performance of these. The model in operation allows the CNCs to be the link between the unit and the clinical service that delivers the care.

The CoP is maintained by the CNCs who value the contribution it makes and therefore allocate time to continue to work together to support the community's activities. The CoP in its turn acts as a link to the organisational-wide processes which support wound prevention and management. It must be acknowledged that the CoP relies on a degree of leadership from within the group and over time this has been provided by various CNCs and is often a shared role. In contrast to the isolation of the individual WCN, the CoP provides a support and education network for both new and established CNCs, which leads to the integration of wound practice both interprofessionally and across the clinical care continuum.

## LIMITATIONS

Several limitations are noted. Firstly, the rotation of medical officers through a statewide hospital network has resulted in an expectation that, like in other hospitals, there is a WCN. The availability of the specialty CNC who has wounds as part of their portfolio is usually drawn to the medical officer's attention on a case by case basis. Secondly, there is limited interdisciplinary representation on the WAG. If other disciplines were involved it would further enhance wound prevention and management as a shared responsibility of the clinical team. Lastly, there is a need for evaluation of this model both in clinical outcomes and cost-benefit to ensure that the viability and flexibility of such a model is robust in the current health care climate.

## CONCLUSION

The benefits of this model include: a coordinated approach to wound management, care across the hospital-community continuum, enhanced succession planning, and better connections with medical and surgical specialities leading to interdisciplinary wound management. In addition, each specialty retains responsibility for wound prevention and management with the ability to: monitor costs; manage simple through to complex wounds; and engage and support the patient and carer.

At our hospital, wound prevention and wound management is incorporated into multiple CNC positions rather than a WCN. This shared responsibility promotes a CoP and "whole-of-hospital" approach with enhanced integration of the IDT. CNCs have a high level of visibility in their clinical areas. This allows junior staff to have ongoing exposure to an expert and facilitates the development of wound care skills and clinical confidence through peer learning. The emerging concept of chronic and complex disease management is best met by holistically assessing and

managing patients, and including their carers in the management process. We believe our model of care supports this approach, and provides case-management or clinical coordination for the increasingly complex patient at risk of developing, or who sustains a wound.

## REFERENCES

1. Prentice JL, Strachan V, Carville K, Santamaria N, Elmes R & Della P. WoundsWest: Delivering comprehensive strategies to improve wound management in Western Australian Health Services. *Wound Practice and Research* 2009; 17(3):122–132.
2. Moore Z, Butcher G, Corbett LQ, McGuinness W, Snyder RJ & van Acker K. AAWC, AWMA, EWMA Position Paper: Managing Wounds as a Team 2014; 23(5 Suppl.):S1–S38.
3. Dutton M, Chiarella M & Curtis K. The role of the wound care nurse: an integrative review. *Community Wound Care* 2014; March:S39–S47.
4. Wenger E. *Communities of practice: Learning, meaning, and identity*. Cambridge University Press, Cambridge, 1998.
5. Rolls K, Kowal D, Elliott D & Burrell AR. Building a statewide knowledge network for clinicians in intensive care units: knowledge brokering and the NSW Intensive Care Coordination and Monitoring Unit (ICCMU). *Aust Crit Care* 2008; 21:29–37.
6. Cheung J. An exploration of the nurse's experience of nursing the outlier patient in the acute care setting: Using a hermeneutic phenomenological approach. University of Sydney Thesis, 2013.
7. Finnie A & Wilson A. Development of a tissue viability nursing competency framework *Br J Nurs* 2003; 12(6):S38–S44.
8. Gerrish K, Guillaume KL, Kirshbaum M, McDonnell A, Tod A & Nolan M. Factors influencing the contribution of advanced practice nurses to promoting evidence-based practice among front-line nurses: findings from a cross-sectional survey. *J Adv Nurs* 2011; 67(5):1079–1090.
9. Australian Commission on Safety and Quality in Health Care (ACSQHC). *National Safety and Quality Health Service Standards*. Sydney: ACSQHC, 2011.



## A highly absorbent dressing enhanced with 125mmHg of negative pressure

New!



### The Nanova™ Therapy Unit

- 30 day lifespan of therapy unit
- An active alternative to passive modern dressings
- Dressings available separately
- No batteries required
- Silent



## Acelity™





Acelity Companies

To learn more about the Nanova™ Therapy System, please contact your KCI – An Acelity Company representative or Customer Service on **1300 524 822**