# Creating a Conservative Sharp Wound Debridement (CSWD) Education Program for Frontline Nurses

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*A recent research project involving the education, training and mentoring of frontline registered nurses (RNs) to perform conservative sharp wound debridement (CSWD) for clients with diabetic foot ulcers demonstrates that it is possible for individual organizations to create internal CSWD educational programs that meet both quality and risk standards and protect care outcomes.[1] This article outlines some of the factors that must be considered when developing and implementing such a program.*

The debridement of necrotic, non-viable tissue in wounds and peri-wound callus is known as conservative sharp wound debridement. It plays an important function in the wound bed preparation paradigm[2,3,4,5] and in evidence-based best practice guidelines and recommendations for many wound types seen in community nursing, such as diabetic foot ulcers, venous leg ulcers, pressure ulcers and open surgical wounds.[6,7,8,9] Necrotic tissue in the wound bed serves as an area ideal for bacterial overgrowth and infection; it can contribute to protein losses in wound exudate and often delays healing. Thick peri-wound callus can increase plantar pressures by as much as 30% in diabetic foot ulcers, thereby preventing wound contraction and healing.[10,11,12]

Performed at the bedside or in the clinic setting, CSWD is considered the most aggressive form of debridement that can be performed by nursing. It is important to note that CSWD

may only be performed by nurses where it is included in the scope of practice for nursing as regulated by each province[13] and allowable only where organizational policy and procedures explicitly permit it.

## A Gap in Practice

Despite the cost-savings demonstrated when CSWD is part of a best practice plan of care for diabetic foot ulcers[16] and in venous ulcers,[17] many community nursing agencies are not able to provide CSWD as part of their care delivery, or they may not be aware of what their nurses are actually doing. In a 2011 survey asking "How is CSWD being practised in Canada, by whom, under what authority, and what is their CSWD-specific educational preparation?"[18] almost 50% of respondent nurses who practise CSWD stated that their employing organization did not have policies around performing CSWD. Recent Canadian wound care conferences (Canadian Association of Wound Care in London, Ontario, 2012; Canadian Association for Enterostomal Therapy, Toronto, Ontario, 2013) provided well-attended interdisciplinary presentations on expanding the RN's role in CSWD, further helping to bring this topic into mainstream discussion.

## Implementing Training

A wound care delivery model having frontline RNs perform CSWD as part of their regular visits has already demonstrated that it can be successful and cost-effective.[19] Aspects of this model were successfully replicated as part of a recent Red Cross Care Partners (RCCP) Registered Nurses Association of Ontario (RNAO) Best Practice Spotlight Organization (BPSO) research project, involving the education, training and mentoring of frontline RNs to perform CSWD for clients with diabetic foot ulcers—a key component of delivering evidence-based care for this population.[1] RCCP has recently expanded this model by initiating a phased-in training program for over 100 frontline nurses to be designated as wound resource nurses, and by providing education and assistance for CSWD in another organization in a collaborative manner.*

Setting up and administering an education program for CSWD requires several considerations,

*Specific information about the Red Cross Care Partners (RCCP) Registered Nurses Association of Ontario (RNAO) Best Practice Spotlight Organization (BPSO) research project is available in the article "The impact of sharp non-viable debridement by competent registered nurses in individuals with diabetic neurotrophic ulcers in the community sector."[1]

some of which are listed below. As with any program, regular updates are necessary to incorporate changing regulations, recent evidence and fiscal realities.

## Legal and Organizational Considerations

Each provincial or territorial regulatory body for nursing has an individual scope of practice. Some clearly allow the performance of CSWD provided the nurse has the knowledge, skill and judgment necessary to assess the individual situation for risks and benefits. Some do not. However, other regulations in each province may prevent nurses from performing CSWD even when the college of nurses allows it. For example, some hospital and long-term-care acts may prevent a nurse from performing CSWD in their employing organization without a medical delegation or transfer of function.

Even in those employment situations where CSWD by nurses is allowed, high-level support and clear organizational policies and procedures that outline the educational and practice requirements for anyone performing CSWD must be present. Although individual organizations carry insurance for liability and risk, they may insist that each nurse carry his or her own personal professional liability insurance if they are going to perform CSWD. This expectation may soon become the norm in Ontario, as by March 31, 2014, liability insurance will be a requirement for any nurse to be registered with the College of Nurses of Ontario.

## Content of the Education

There are two excellent, free, online resources to help determine the content of an educational program that aims to provide competence in CSWD. The Australian Wound Management Association (AWMA — www.awma.com.au/pages/competencies.php) outlines the educational content requirements needed by an organization seeking endorsement for accreditation. The Canadian Association for Enterostomal Therapy's Evidence-Based Recommendations for Conservative Sharp Wound Debridement document is available at www.caet.ca/caet-english/education.htm and provides clear organizational, policy and clinical recommendations supported by references and rationale.

## Selection of Nurses

As in any sub-specialty of nursing, it is important to match the interest level, professional conduct and skills of the individual nurse to the prospective task. To find nurses to train in CSWD as part of the BPSO research project, nurse managers were asked to identify generalist nurses who had the following attributes so they might be trained to become wound resource nurses:

- is a critical thinker, with good problem-solving skills
- has an interest in holistic wound care; sees the client as more than the dressing change required
- is self-directed and willing to take initiatives
- acts as a strong advocate (champion) for evidence-based practices
- is recognized by peers as having leadership qualities
- demonstrates elements of collaborative practice

The RNAO BPSO study, although small in size, clearly brought forward two conflicting items of qualitative feedback from the nurses:

1. They all felt empowered to be able to provide CSWD and saw improvement in their clients' wounds because they were able to perform CSWD.
2. The intervention added at least 20 minutes to an hour per visit without any additional remuneration.[1]

With the majority of visiting nursing agencies within Ontario, for example, paying nurses on a per-visit rather than hourly basis, even the most dedicated nurse needs to be aware when agreeing to take on the expanded role of providing CSWD that visits take more time and may mean a loss of income if fewer visits are made.

## Competencies for CSWD

The AWMA provides guidelines for the creation of competency assessment tools at www.awma.com.au/pages/competencies.php while Vowden and Vowden[20]

and Dowsett[21] provide very practical advice on what a nurse performing CSWD is expected to demonstrate, including some of the following:

- knowledge of all current organizational infection control practices
- access to adequate equipment, lighting and assistance
- capacity to explain the procedure and obtain informed consent
- good knowledge of relevant anatomy
- capability to identify viable tissue
- ability to manage pain and discomfort prior to, during and following the procedure
- knowledge and skill to deal with complications such as bleeding
- recognition of skill limitations and those of the technique
- ability to utilize secondary debridement techniques if needed

An example of a CSWD competency checklist can be found on page 24 and adapted for use.

an internally prepared online PowerPoint voice-over covering the physiology of wound healing, the anatomy of the skin and underlying structures.

The face-to-face components are delivered via PowerPoint and lecture, covering the following content:

- code of professional conduct and review of scope of practice
- purpose and types of CSWD
- other debridement methods
- working with other health professionals
- the psychological issues associated with wounds that contain necrotic and other non-viable tissue, their impact on the individual and their family/carers
- review of RCCP policy and procedure
- safe practice considerations
- understanding the consequences of not debriding a wound[22]

## CSWD: To Do or Not to Do?

**Two famous quotations serve as caveats around CSWD:**

*"Fools go where angels fear to tread"*[14]

is for those individuals who proceed to use CSWD without legislation, policy, knowledge, skill and judgement to be competent or to determine the safety for the patient.

*"A little neglect can breed great mischief"*[15]

is for those who see necrotic tissue or thick peri-wound callus and do not ask for help.

## Delivering the Education

Improvements to the education program following the conclusion of the initial BPSO project include aspects of the online components of education such as pre-learning reading of the seminal wound bed preparation article[1] and the 2011 updates, Parts 1 and 2[4,5] followed by

- client teaching and informed consent
- potential complications of CSWD
- contraindications
- why and when to debride; when to stop
- pain assessment and management regarding CSWD
- how to manage complications
- when to refer to physicians
- appropriate documentation of the wound pre- and post-procedure, including photography
- outlining a holistic plan of care, which includes provision for ongoing assessment, treatment and clear treatment

objectives, as well as planning of frequency and extent of debridement

Participants then watch two videos[23,24] followed by a hands-on practicum using pigs' feet and candles to practise paring, shaving, scoring and removal of tissue, and to identify fascia, muscle, tendon, ligaments and bone. It is recommended that, if possible, organizations delivering this type of education engage a local surgeon or physician who performs sharp debridement to attend the first workshop to ensure safety and to build relationships with staff.

## Mentoring

Each organization needs to determine who is best able to provide mentoring during hands-on skill acquisition. It may be a surgeon, an enterostomal therapy nurse or other wound care specialist, or a frontline nurse who is competent in CSWD with more than one year of experience, for example. The number of paid mentored visits should be adequate for the practitioner to feel competent and able to perform independently; this will depend in part on the complexity and variety of patients/clients requiring CSWD during mentored visits.

## Documentation

Nurses performing CSWD should document, at the very least:

- client consent to treatment
- the area debrided
- the type of tissue
- the presence of any bleeding and effectiveness of measures used to control it
- the appearance of the wound
- any pain associated with the procedure
- the dressing applied, including a choice to move to an adjunctive or alternate method of debridement

All of these (except pain and wound appearance if using a quantitative scoring system such as the BWAT[25]) are qualitative rather than quantitative in nature. There is one quantitative system, the Saap/Falanga's Debridement Performance Index (DPI),[26] which was developed to evaluate the performance and adequacy of debridement in diabetic foot ulcers (DFUs). It includes the parameters of (a) removal of callus, (b) removal of ulcer's edge undermining, and (c) removal of wound bed necrotic or infected tissue. Although nurses would not be debriding viable ulcer edge where undermining exists, and it has not been validated for use in wounds needing CSWD other than DFUs, it is a place to start and it seems reasonable to use this score for any CSWD performed, to document what was assessed and what was or was not debrided. In order to support nursing actions and measure the outcomes of CSWD being provided, it is necessary to have concise documentation.

## Conclusion

In the absence of a set of national standards and competencies for CSWD, and without a formal public education program that provides foundational education, hands-on learning and competency development, the BPSO project demonstrates that it is possible for organizations who wish to fully offer evidence-based, client-focused, quality care for chronic wounds to, with care and diligence, create an internal CSWD educa-

tional program that meets both quality and risk standards, and protects care outcomes.

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## References


1. Harris CL, Harris A, Browne C, Byrnes B. The impact of sharp non-viable debridement by competent registered nurses in individuals with diabetic neurotrophic ulcers in the community sector. Diabetic Foot Canada. Manuscript submitted for publication 2013.
2. Sibbald RG, Williamson D, Orsted HL, Campbell K, Keast D, Krasner D, Sibbald D. Preparing the wound bed--debridement, bacterial balance, and moisture balance. Ostomy Wound Manage. 2000;46(11):14–22,24–8,30–5;quiz 36–7.
3. Schultz GS, Sibbald RG, Falanga V, Ayello EA, Dowsett C, Harding K, Romanelli M, Stacey MC, Teot L, Vanscheidt W. Wound bed preparation: a systematic approach to wound management. Wound Repair Regen. 2003;11(Suppl 1):S1–28.
4. Sibbald RG, Goodman L, Woo KY, Krasner DL, Smart H, Tariq G, Ayello EA, Burrell RE, Keast DH, Mayer D, Norton L, Salcido RS. Special considerations in wound bed preparation 2011: an update [Part 1]. Wound Care Canada. 2012;10(2):20–35.
5. Sibbald RG, Goodman L, Woo KY, Krasner DL, Smart H, Tariq G, Ayello EA, Burrell RE, Keast DH, Mayer D, Norton L, Salcido RS. Special considerations in wound bed preparation 2011: an update [Part 2]. Wound Care Canada. 2012;10(3):25–33.
6. Registered Nurses' Association of Ontario. Assessment and management of venous leg ulcers. Toronto (ON): Registered Nurses Association of Ontario; c2004–2007. 115p Available from: http://rnao.ca/sites/rnao-ca/files/Assessment_and_Management_of_Venous_Leg_Ulcers.pdf.
7. Registered Nurses' Association of Ontario. Assessment and management of stage I to IV pressure ulcers (revised). Toronto (ON): Registered Nurses Association of Ontario; c2002–2007. 115p. Available from: http://rnao.ca/sites/rnao-ca/files/Assessment__Management_of_Stage_I_to_IV_Pressure_Ulcers.pdf.
8. Registered Nurses' Association of Ontario (2013). Assessment and management of foot ulcers for people with diabetes. 2nd ed. Toronto (ON): Registered Nurses' Association of Ontario; c2013. 160p Available from: http://rnao.ca/sites/rnao-ca/files/Assessment_and_Management_of_Foot_Ulcers_for_People_with_Diabetes_Second_Edition1.pdf.
9. Orsted HL, Keast DH, Kuhnke J, Armstrong P, Attrell E, Beaumier M, Landis S, Mahoney JL, Todoruk-Orchard M. Best practice recommendations for the prevention and management of open surgical wounds. Wound Care Canada. 2010;8(1);6–34.
10. Young MJ, Cavanagh PR, Thomas G, Johnson MM, Murray H, Boulton AJ. The effects of callus removal on dynamic plantar foot pressures in diabetic patients. Diabet Med. 1992;9(1):55–57.,
11. Potter J, Potter MJ. Effect of callus removal on peak plantar pressures. The Foot. 2000;10(1):23–26.
12. Slater RA, Hershkowitz I, Ramot Y, Buchs A, Papoppart MJ. Reduction of digital plantar pressure by debridement and silicone orthosis. Diabetes Research and Clinical Practice. 200674(3):263–266.
13. Harris RJ. The nursing practice of conservative sharp wound debridement: promotion, education and proficiency. Wound Care Canada. 2009;7(1):22–30.
14. Pope A. (1688 - 1744) An essay on criticism. 1709.
15. Franklin B. (1706–1790). Available at: www.ushistory.org/franklin/quotable/quote69.htm.
16. Shannon R, Harris C, Harley C , Kozell K, Woo K, Alavi A, Boutros M, Kozody LL, Sibbald RG. The importance of sharp debridement in foot ulcer care in the community: a cost-benefit evaluation. Wound Care Canada. 2007;5(Supp 1):S51–52.
17. Shannon RJ. A cost-utility evaluation of best practice implementation of leg and foot ulcer care in the Ontario community. Wound Care Canada. 2007;5(Supp 1):S53–S56.
18. Rodd-Nielsen E, Harris CL. Conservative sharp wound debridement: an overview of Canadian education, practice, risk, and policy. J Wound Ostomy Continence Nurs. In Press 2013;40(6):1–9.
19. Harris C, Shannon R. An innovative enterostomal therapy nurse model of community wound care delivery: a retrospective cost-effectiveness analysis . J Wound Ostomy Continence Nurs. 2008;35(2):169–183.
20. Vowden K, Vowden P. Wound bed preparation. World Wide Wounds [Internet]. c1992–2001. 2002 Mar. [cited 2003 Feb. 23] Available from: www.worldwidewounds.com/2002/april/Vowden/Wound-Bed-Preparation.html.
21. Dowsett C. The role of the nurse in wound bed preparation. Nurs Stand.2002 Jul;16(44):69–72,74,76.
22. Baharestani M. The clinical relevance of debridement. In: Baharestani M, Gottrup F, Holstein P, Vanscheidt W, editors. The clinical relevance of debridement. Berlin: Springer-Verlag, 1999: Chapter 3.
23. Wethe JD, Sussman C, Fowler E. Sharp debridement videos: series of 3. 1996 Available through Sussman Physical Therapy Inc. Torrance, CA, 90505.
24. Steed DL. Debridement of a full thickness foot ulcer in the patient with diabetes [videocassette]. Johnson & Johnson. 1997.
25. Bolton L, McNees P, van Rijswijk L, de Leon J, Lyder C, Kobza L, Edman K, Scheurich A, Shannon R, Toth M. Wound-healing outcomes using standardized assessment and care in clinical practice. J Wound Ostomy Continence Nurs. 2004;31(2):65–71.
26. Saap LJ, Falanga V. Debridement performance index and its correlation with complete closure of diabetic foot ulcers. Wound Rep Reg. 2002;10(6):354–359.

# Competency-based Conservative Sharp Wound Debridement (CSWD)

Mentoring includes a one-on-one practicum with a wound care specialist or wound CNS, until the individual and trainer feel that he/she is competent. The nurse who performs CSWD is expected to demonstrate the following competencies during mentored visits:

| | Mentored Visits | | | | Follow-up | |
|---|---|---|---|---|---|---|
| **Competency** | **1** ✓ or ✗ | **2** ✓ or ✗ | **3** ✓ or ✗ | **4** (if needed) ✓ or ✗ | **1** (if needed) ✓ or ✗ | **2** (if needed) ✓ or ✗ |
| **Date:** | | | | | | |
| Maintain Red Cross Care Partners infection control practices. | | | | | | |
| Access adequate equipment, lighting and assistance (if needed). | | | | | | |
| Explain the procedure and obtain informed consent. | | | | | | |
| Demonstrate a good knowledge of relevant anatomy. | | | | | | |
| Identify viable tissue. | | | | | | |
| Manage pain and discomfort prior to, during and following the procedure. | | | | | | |
| Demonstrate acceptable skill and technique with CSWD. | | | | | | |
| Recognize skill limitations and those of the technique. | | | | | | |
| Deal with any complications such as bleeding (may be NA). | | | | | | |
| Utilize secondary debridement techniques if needed. | | | | | | |
| Document CSWD using RCCP forms. | | | | | | |
| Outline a holistic plan of care for ongoing debridement. | | | | | | |

Signature/status of mentor for Mentored Visit 1: _____

Signature/status of mentor for Mentored Visit 2: _____

Signature/status of mentor for Mentored Visit 3: _____

Signature/status of mentor for Mentored Visit 4: _____

Signature/status of mentor for Follow-up Visit 1: _____

Signature/status of mentor for Follow-up Visit 2: _____

## Achievement of Competency:

I have mentored this nurse for the _____ mentored visits and feel that he/she has demonstrated sufficient competency to perform independent CSWD.

Signature/status of mentor: _____

Signature of practitioner: _____ Date: _____