Developing a Wound Care Program in Long-term Care:

Changing the Focus from Products to Prevention

By Bernadette Mitchell McDonald, RN, BComm, IIWCC, Clinical Resource Manager

Wound care in long-term care (LTC) presents challenges that are unique to this sector of health care. Many LTC residents are frail elderly who have multifactorial co-morbidities, which place them at a higher risk of pressure injury. As well, there are challenges with staff awareness, education and limited access to products that are available in other health-care sectors.

The purpose of this article is to share the changes that were put in place at Northwood, a continuing care organization, to develop a wound care program that would educate staff, implement best practices, decrease the prevalence of pressure injury and decrease the cost of care delivery, resulting in better efficacy and improved outcomes.

Northwood provides care to 641 residents—485 at Halifax Campus and 156 at Bedford Campus. Prior to 2012, Northwood did not have a formal wound program, and treatment modalities were physician-driven using a provincial wound product formulary comprising 337 wound products. In 2012, it was decided by a team of clinicians, who became part of a wound care community of practice, that the delivery of care needed to be restructured by updating resources, educating all levels of clinical staff and implementing current wound care evidence-based best practices.

Fostering a culture shift meant administration supporting an environment for staff that would focus on interprofessional strategies to prevent pressure injuries.

Assessment of Current Situation

In April 2012, a full assessment of the current wound care program and products was completed, and the findings were as follows:

- The formulary had numerous products from different suppliers with similar properties (337 products).
- Physicians were ordering traditional treatments based on preference, leading to confusion and inappropriate use by registered staff.
- The few staff had minimal training in wound care and required physicians to make the decisions.
- There were no set protocols followed by all registered staff or physicians.
- The wound care resource role was an addition to regular charge nurse duties, resulting in inconsistent delivery of care.
- Physicians' prescribing habits and limited wound care knowledge led to unsuitable

treatment regimens, prolonging healing or impairing outcomes.
- Examination of product costs revealed Northwood was paying more through their current supplier than they would through a group purchasing contract.
- Occupational therapists and dietitians had little involvement in wound management.
- Many supplies were wasted as a result of inappropriate treatment regimens.
- Indicator monitoring was unreliable due to inconsistencies.
- Pressure injury prevalence rates in 2013 fluctuated from 5 to 8%.

Proposed Project Outcomes

In 2012, a project was proposed with a focus on three core areas.
- The first focus was on *resident care*, with goals being to a) reduce healing time, b) reduce the prevalence and incidence of pressure injuries and c) reduce the number of referrals to specialty clinics, thus reducing transportation costs for our residents.
- The second focus was on the *facility*, the goals being implementation and compliance of current best practice guidelines for wound prevention and management, improved resident care and improved use of registered staff resources by expanding their scope of practice through training and education.
- The third focus was to improve our *health-care system* in order to reduce costs of wound care

products used in long-term care through product standardization and implementation of evidence-based best practices.

In April–May 2012, an action plan was formulated to accomplish the following:

- Review evidence-based guidelines currently available.
- Develop a formulary based on the provincial group purchasing contract.
- Run a trial of an electronic software program to track outcomes.
- Meet with the Department of Health and Wellness (DHW) to review potential cost-saving initiatives, which resulted in a joint project.
- Hold discussions with wound care product suppliers to determine appropriate product use and ability, to improve consistency.
- Identify a company that could provide consistency in products on formulary available through current supplier and GPO contract. Monthly education sessions were offered to staff.

Implementation

Over the course of summer 2012, the wound resource team implemented, with DHW, a project charter. With the support of IT, Financial Services and Materials Management, the team also implemented a software program. Initially the software program was put in place on two medical units, and 140 professional staff were trained. The team developed a wound resource binder, using resources from the Registered Nurses' Association Ontario (RNAO)[1–4] and Wounds Canada's Best Practice Recommendations,[5] then placed these on all 15 units. Education modules were presented to the Wound Resource Champions. Going forward, routine medical directives would be vetted through the pharmacy and therapeutics committee to assist staff in selecting treatments based on evidence-based best practices. The team entered wound data for all residents into the software program to monitor care, supplies, outcomes and costs. By fall 2012, the wound care formulary was aligned with the provincial formulary, and a new product list was developed from the current provincial list, resulting in the number of products being reduced from 337 to 39.

Over the next few years, the team went on to evaluate the initial project, and its success led to the program being implemented at a second campus.

From 2012 to 2017, the team held several one-hour and full-day education sessions on various wound care topics for all staff. In 2016 and 2017, it went on to host two one-day wound education programs for other long-term care facilities. Presenters included long-term care clinicians with wound care expertise, an occupational therapist, a pharmacist and a dietitian; there were also presentations by a clinician who had developed a multidisciplinary leg ulcer clinic in acute care. Attendees included nurse managers, registered nurses (RN), licensed practical nurses (LPN), nursing educators, a nurse practitioner (NP), an occupational therapist and dietitians.

Results

The wound resource team evolved and remains an interprofessional team (including RN, LPN, OT, DT, NP and nursing educators), all with a common interest in wound care. Unit staff offer case presentations to share success stories about com-

plex residents and the positive outcomes they have seen. An interdisciplinary wound referral form was developed for the interprofessional team for more effective use of resources.

The team was given autonomy from DHW to modify their wound product list and use products available on the GPO contract. The new list comprised two parts:

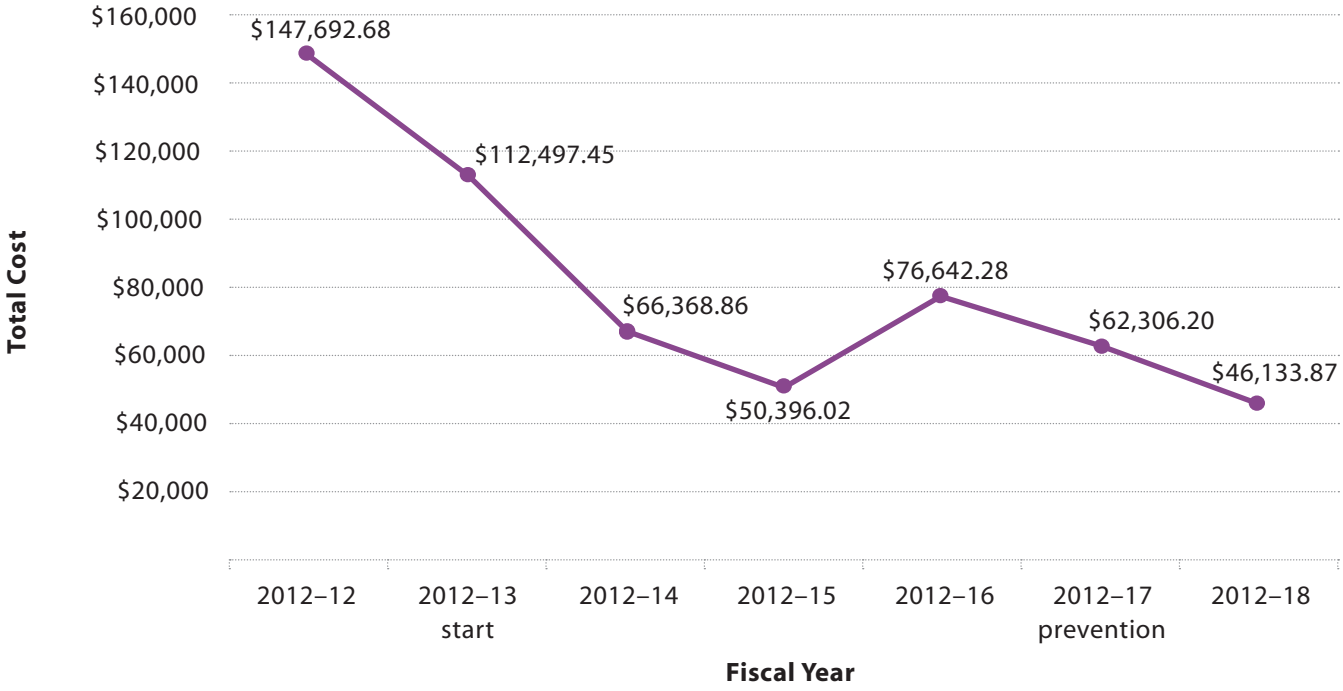
1. 58 products wound care staff can select from in treating residents
2. 37 products for which staff require special authorization for use in treating residents

In 2017 modifications were made to our wound resource binders, using current resources such as Wounds Canada's Best Practice Recommendations,[5] the British Columbia Provincial Nursing Skin and Wound Committee's Guideline: Braden Scale for Predicting Pressure Ulcer Risk in Adults and Children, CLWK product cheat sheets,[6] assessment and documentation tools, copies of education sessions held, SCALE[4] and the Registered Nurses' Association of Ontario's (RNAO) Health Care providers' turning and position techniques document.[7] Version 2 of this binder is currently being revised and updated.

Preventative Team Approach

Prevention is now the focus of care. Skin assessments are done within two hours for a new admission and for any resident that has spent a minimum of 12 hours in the emergency department. The Braden Scale[8] is completed within the first 72 hours of admission and within 24 hours for readmissions. Follow-up Braden Scale assessments are then completed every two to four weeks based on the resident's risk for pressure injury. The nurse practitioner for the facility performs ABPIs and sharp debridement when required. This has tremendously improved healing outcomes and reduced the frequency of sending residents out of the facility for these specialty services. Wound rounds continue to be completed virtually on a monthly basis, and then quarterly on each unit by a wound resource nurse. Prevalence and incidence are also reported to administration and DHW within the same time frames. As part of a quality indicator, each unit now reports

Figure 1: Wound Care Product Total Costs: 2011–12 to 2017–18



the number of facility-acquired pressure injuries (FAPI) on their unit for families and residents.

Results

In June 2018, the wound resource team completed a prevalence and incidence (PI) study at both campuses. The results:

Campus 1: prevalence 1.9%; incidence 1%

Campus 2: prevalence 2.58%; incidence 2%

Before the project began, the cost of all wound products purchased for our facility in the 2011–12 fiscal year was calculated to be $147,692. In 2014–15, the cost had been reduced to $50,396. Currently, the cost for the 2017–18 fiscal year is $46,133. This represents a 59% reduction compared to when the project started in 2012 (see Figure 1).

Mandatory education modules have been developed for our online learning program, covering new procedures on prevention, selection of wound products, ABPI and turning and positioning techniques for Continuing Care Assistants (CCA). A skin tear prevention program is in development and will soon be rolled out, followed by a lower limb assessment program. The formulary has been separated into two parts. One that registered staff can order internally and the second requiring special authorization by a wound care clinician. In June 2018, the DHW approved and adopted the concept idea for this program for all long-term care facilities in the province of Nova Scotia.

Conclusion

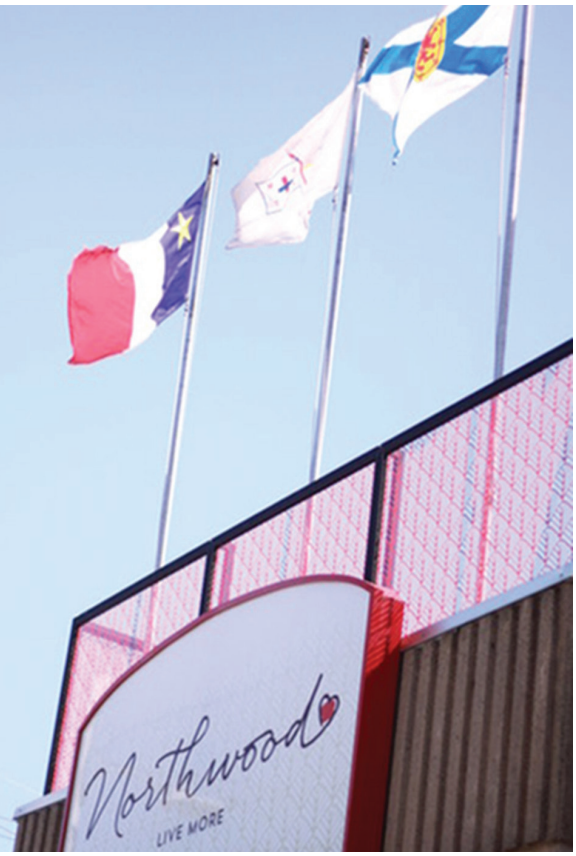
This project has been successful from a care delivery perspective, but also it has demonstrated a culture shift in staff that embodies a sense of pride, camaraderie and an interprofessional approach to wound management and prevention.

Acknowledgements

Thank you to the Halifax and Bedford campuses wound resource teams, Cathy Burrows, RN, BScN, MScCH (Wound Prevention & Care), and the management and administration of Northwood, whose support made this project possible.

References

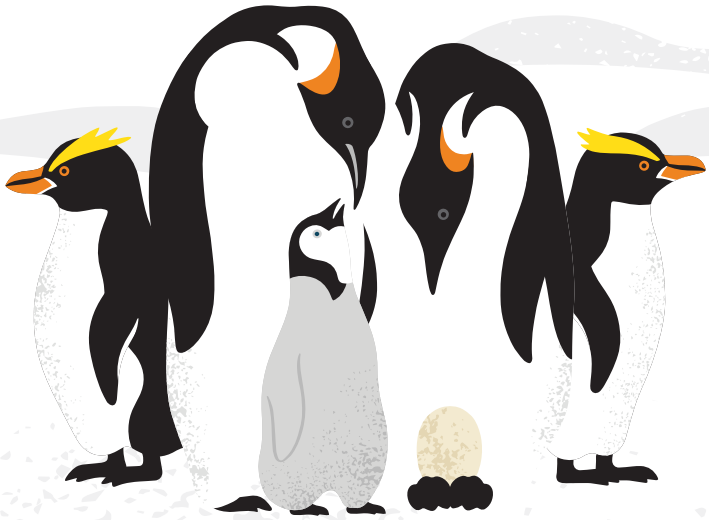
1. Registered Nurses' Association of Ontario. Best Practice Guideline:



Risk Assessment and Prevention of Pressure Ulcers. Toronto, ON: Registered Nurses' Association of Ontario; 2005, revised 2011.

2. Registered Nurses' Association of Ontario. Best Practice Guideline: Risk Assessment and Management of Stage I to IV Pressure Ulcers. Toronto, ON: Registered Nurses' Association of Ontario; 2007.
3. Registered Nurses' Association of Ontario. Best Practice Guideline: Risk Assessment and Management of Foot Ulcers for People with Diabetes. Toronto, ON: Registered Nurses' Association of Ontario; 2013.
4. Registered Nurses' Association of Ontario. Best Practice Guideline: Risk Assessment and Management of Venous Leg Ulcers. Toronto, ON: Registered Nurses' Association of Ontario; 2004.
5. Orsted HL, Keast DH, Forest-Lalande L, Kuhnke JL, O'Sullivan-Drombolis D, Jin S, et al. Best practice recommendations for the prevention and management of wounds. In: Foundations of Best Practice for Skin and Wound Management. A supplement of Wound Care Canada; 2017. 74 p. Available from: www.woundscanada.ca/health-care-professional/education-health-care-professional/advanced-education/12-health-care-professional/110-supplements.
6. British Columbia Provincial Nursing Skin and Wound Committee. Guideline: Braden Scale for predicting pressure ulcer risk in adults and children. 2014. Available from: www.clwk.ca/buddydrive/file/guideline-braden-risk-assessment/.
7. Registered Nurses' Association of Ontario. Positioning techniques in long term care: Self-directed learning package for health care providers. Toronto, Canada: The Association; 2007.
8. Braden, B, Bergstrom, N. Predictive validity of the Braden Scale for pressure sore risk in a nursing home population. Res Nurs Health. 2007;17(6): 459–70.

ConvaTec | Advanced Wound Care



Skin's Guardians

Protect. Defend. Nurture.

Protects the peri-wound skin against maceration*[3,4]
Defends against skin breakdown and infection*
Nurtures an environment to promote optimised wound healing*[6-8]

Our unique AQUACEL® Foam dressing range with Hydrofiber® technology:

Micro-contours*
To the wound bed[1], eliminating dead spaces where bacteria and biofilm can grow.[1,2]

Locks In*
Excess exudate, vertically wicking fluid[3] to help prevent maceration and skin damage.[4,5]

Balances*
Wound fluid levels to maintain a warm, moist wound healing environment.[6-8]

POWERED BY Hydrofiber® TECHNOLOGY

*As demonstrated in vitro

For more information, please call our Customer Relations Center (Registered Nurses on staff) at **1-800-465-6302**, Monday through Friday, 8:00 AM to 6:00 PM (EST), or visit our Web Site at **www.convatec.ca**

AQUACEL® Foam AQUACEL™ Ag Foam FoamLite™ ConvaTec

1. Bowler P, Jones S, Towers V, Booth R, Parsons D, Walker M, 2010. Dressing conformability and silver-containing wound dressings. Wounds UK; 6: 14-20. **2.** Jones SA, Bowler PG, Walker M, 2005. Antimicrobial activity of silver-containing dressings is influenced by dressing conformability with a wound surface. WOUNDS, 17: 263-270. **3.** Waring MJ, Parsons D, Physicochemical characterisation of carboxymethylated spun cellulose fibres. Biomaterials. 2001;22(9):903-912. **4.** Walker M and Parsons D, 2010. Hydrofiber® Technology: its role in exudate management. Wounds UK 6: 31-38. **5.** Parsons D, Bowler PG, Myles V, Jones SA, 2005. Silver antimicrobial dressings in wound management: A comparison of antibacterial, physical and chemical characteristics. WOUNDS, 17: 222-232. **6.** Barnea Y, Amir A, Leshem D, et al. Clinical comparative study of Aquacel and paraffin gauze dressing for split-skin donor site treatment. Ann Plast Surg. 2004; 53(2):132-136. **7.** Kogan L, Moldavsky M, Szvalb S, Govrin-Yehudain J. Comparative study of Aquacel and Silverol treatment in burns. Ann Burns Fire Disasters. 2004;17(4):201- 207. **8.** DM, Foster KN, Hermans MHE, Rick C, 2004. AQUACEL® Ag in the management of partial-thickness burns: Results of a Clinical Trial. J. Burn Care Rehabil.; 25: 89-97.