Implementing a Complex-wound-care Rotation for Medical Residents:

The Centre Hospitalier de l'Hôtel Dieu de Lévis Experience

BY Richard Belley

September 25, 2006, was a proud day for all members of the Complex Wound Care Clinic of the Centre Hospitalier Affilié de l'Hôtel Dieu de Lévis, as we welcomed our first resident into a complex-wound-care rotation. Getting this new program off the ground required systematic steps to obtain the support of hospital administration and university faculty. This article outlines the steps we took to get the rotation implemented in our facility and discusses some of the rewards and challenges in launching a program of this type.

Richard Belley, MD, BSc, was certified by the College of Family Physicians of Canada in 1995 and has been practising emergency medicine since then. Since 2002, he has been a member of the Complex Wound Care Clinic and the Hyperbaric Medicine facility at the Centre Hospitalier de l'Hôtel Dieu de Lévis, affiliated with Laval University, Quebec City, QC. He is also a clinical professor and the main supervisor for the complex-wound-care rotation at the Faculty of Medicine of Laval University.

Prerequisites

To offer a complex-wound-care rotation you need a motivated wound-care service and the capacity to do so. In practical terms, the "capacity" of the service means the following: (1) university affiliation or links with a faculty of medicine, (2) an existing clinical structure with clinicians who are interested in teaching and who have the appropriate expertise in their fields of practice, (3) a critical volume of patients, (4) a sufficient number of examination rooms and offices to allow adequate work space for residents, nurses, wound-care physicians and specialty consultants as needed, (5) staff driven by a multidisciplinary approach to wound care, and (6) up-to-date technology for investigation and therapeutic purposes.

Developing the Curriculum

Once these practical issues have been addressed, a curriculum can be developed and presented to the Faculty of Medicine of the affiliated university. Our university's requirements included a *curriculum vitae* from each of the rotation's supervisors, with special emphasis on research experience and teaching abilities. Also the

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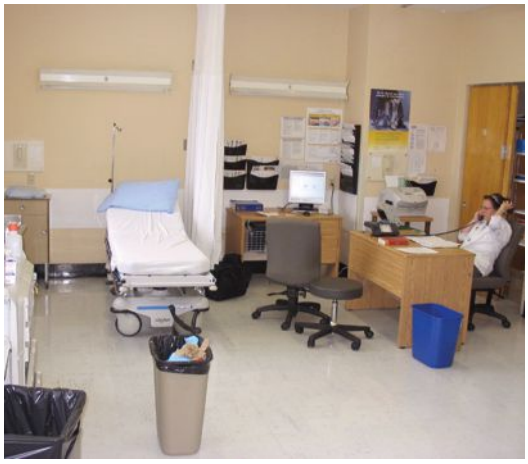

The examination room of the Complex Wound Care Clinic at the Centre Hospitalier Affilié de l'Hôtel Dieu de Lévis.

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curriculum must contain rotation details, such as location and duration, residents' training level, resident capacity during any single period, and course objectives. In our case, we chose to have first- or second-year residents from different services such as internal medicine, family medicine, dermatology, emergency medicine, geriatrics or surgery. We decided to offer a one-month rotation, open to only one resident at a time.

In developing the rotation, objectives must be clear and precise, as they are relied on by both residents and supervisors for evaluation purposes (Figure 1). The different types of learning situations, the format of supervision and a description of the clinical team must be presented. For example, in our case, "the resident involved in the complex-wound-care rotation will be exposed to patients with various types of wounds originating from ambulatory care (85 per cent), hospital (15 per cent) and emergency wards (five per cent). Each resident has to perform his/her own evaluation of the patient, elaborate a differential diagnosis, and decide on the investigation and treatment plans. The resident must be actively involved in multidisciplinary discussions. The resident will work with one of the clinic's eight physicians at any one time, who are themselves family medicine practitioners or emergency physician specialists with expertise in complex wound care, as well as one or two ostomy and wound-care nurses." A typical schedule for a one-month rotation is presented in Figure 2.

FIGURE 1

Objectives of the Complex-wound-care Rotation

1. Diagnose, investigate and treat different types of wounds:
   - venous ulcers
   - arterial ulcers
   - mixed venous and arterial ulcers
   - diabetic and other neuropathic ulcers
   - pressure ulcers
   - infected ulcers with osteomyelitis
   - inflammatory ulcers
   - chronic ulcers secondary to any type of cutaneous condition
2. Assess the pertinence and the type of debridement to use.
3. Apply knowledge related to wound healing for the selection of dressings and other topical wound-care products and devices.
4. Understand the role of investigation tools to evaluate the vascular status of some chronic wounds. Be aware of the uses of and indications for transcutaneous oxymetry, especially regarding systemic hyperbaric oxygen therapy.
5. Be capable of discussion with the patient and family to include them in global treatment decisions and to ensure that questions and concerns have been addressed.
6. Appreciate the multidisciplinary approach in complex wound care and the role of the different specialists involved (nursing, shoe and ortheses specialist, physiotherapist, nutritionist, hyperbarist, orthopedist, vascular and plastic surgeon, endocrinologist, internist, interventional radiology, nuclear medicine, infectious disease specialist, neurology, dermatology, etc.)
7. Organize a treatment plan through appropriate communication between physician and home-care nursing.
8. Appreciate the problems, both economical and psychosocial, that could have a direct impact on the treatment plan.
9. Be able to involve the patient in the treatment plan and recognize the patient at risk of re-ulceration.
10. Apply evidence-based medicine to complex wound care.

Adapted from the Dermatology Day Care and Wound Healing Clinic, Sibbald, Ryan and Reddy, University of Toronto, August 2004.

Reference books must also be available on site (Figure 3). If possible, introductory documents pertaining to the rotation must be handed out to each resident upon his or her acceptance into the rotation. Each resident beginning a rotation with our clinic receives a document developed by our staff. This document, considered essential, includes administrative information, a copy of the 2006 Best Practice Recommendations articles (with permission from the editors of *Wound Care Canada*) as well as copies of PowerPoint® presentations given by our physicians in the past.

Once the overall curriculum has been developed, it can be presented to the university faculty, which, in our case, consists of program directors representing all specialties, including family medicine. The program directors are then free to propose the rotation to their residents.

Rewards and Challenges

Positive and negative outcomes have arisen from the submission process. One of the positive elements was that our project was perceived as an innovative rotation not yet offered at Laval University. Complex wound care is a subject not usually considered in Quebec medical faculties, and this rotation was said to offer residents the opportunity to gain knowledge that would be useful in their practice, regardless of specialty.

The development of the rotation resulted in approval being given by hospital administration for the transfer of the wound-care clinic to a newer, larger location in

FIGURE 2

The Resident's Typical One-month Workload During the Rotation

- familiarization with the introductory document (especially the 2006 best practice recommendations) received at the beginning of the rotation
- evaluation of all new ambulatory patients at the wound-care clinic
- evaluation of ambulatory patients during follow-up visits to the wound-care clinic
- emergency-room consultations for all diabetic foot ulcers or other types of chronic wounds for which an expert opinion on wound care or dressing is requested
- new consultations and follow-up on the ward for patients with Wagner stage 2 or more
- one half to full day at the transcutaneous oxymetry laboratory
- one half to full day at a prosthesis and orthesis laboratory
- one half to full day in the hyperbaric medicine service
- one to two days of home care (medical evaluation of patients at home with a physician and home-care nurse)
- lectures given by physicians of the complex wound clinic on various subjects

the hospital. The previous location was not an ideal working environment for the residents, so expansion to a new location was deemed a prerequisite by our clinical team. The new room now allows for the care of three patients at a time and creates an ideal working environment for nurses, physicians and residents.

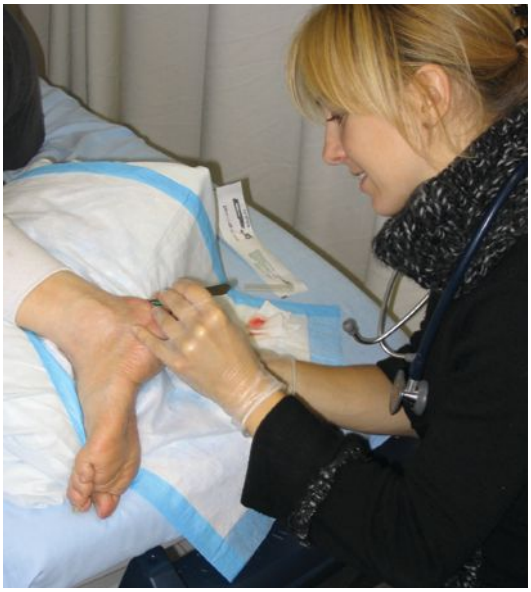
One of the challenges in having residents in the Complex Wound Care Clinic is related to a modification in the physician schedule. Small changes in the clinic schedule are necessary in order to accommodate teaching activities such as conventional lectures or bed teaching. These teaching activities take time and are unfortunately not always remunerated as well as clinical activities in the Quebec health system.

FIGURE 3

References Available to Residents

Following is a non-exhaustive list of reference books made available at the hospital library for the residents:

- Krasner DL, Rodeheaver GT, Sibbald RG, (eds.). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*. Wayne, PA: HMP Communications. 2001.
- Bowker JH, Pfeifer MA, (eds.). *Levin and O'Neil's The Diabetic Foot*, Sixth Edition. St. Louis: Mosby. 2001.
- Sheffield PJ, Smith APS, Fife C, (eds.). *Wound Care Practice*. Flagstaff, AZ: Best Publishing Company. 2004.



Dr. Geneviève Gaudreau, a first-year resident in plastic surgery, doing sharp debridement on a patient with a chronic diabetic neuropathic ulcer.

Overall, our wound-care team sees the implementation of this new and innovative residency rotation at Laval University Faculty of Medicine as an extraordinary opportunity to instill in these future physicians an awareness of the wound-care and multidisciplinary work to which they will be rarely exposed during their residency training. We think many residents from various specialties could benefit from the rotation and become more confident physicians when exposed to these types of pathologies, which already account for a large proportion of general care given to a progressively aging population.