

# Mobile wound care: Transforming care through technology

By N. Cleator, S. Goodwin, and I. Holubiec

## Background

Wound care may account for more than 40% of the nursing visits provided in the community. There are a number of driving forces acting on home-care agencies that are encouraging them to adopt a mobile telehealth strategy for wound care management.<sup>1</sup> Among these driving forces are increased demands for wound care, shortages of wound-care experts, the wide geographic spread of patients and economic considerations of demonstrating effective wound-care outcomes while containing costs. Accessing expert consultation over a distance, using mobile electronic devices (e.g., cellphones) and digital photography, will result in improved client access to the limited number wound experts, increased quality of care, and cost-effective wound care.<sup>1,2</sup>

The current reality is that many regions lack specialized wound-care resources for clients at home, leaving clients with several unsatisfactory choices, including travelling large distances to see a specialist or accessing acute-care services for follow-up treatments or consultations with wound experts. In addition, home-care nurses—who are highly autonomous professionals—may not have the necessary competencies to manage complex client needs.

## The VON mobile wound-care project

In North Bay, Ontario, the Victorian Order of Nurses (VON) is transforming wound care by having community nurses consult with expert wound resources via today's technology. Using mobile devices, nurses capture digital images, conduct assessments, and review wound progress. During home visits, a nurse can make an electronic referral to a community-based wound expert (enterostomal therapist or physician) no matter where they are located. What happens next is incredible. The wound expert securely accesses and reviews the client's electronic assessment data and digital images, and sends back recommendations



to the nurse for an evidence-based treatment plan—all at the click of a mouse. The client does not have to travel to see the wound expert, and the nurse can convey all the pertinent information to the specialist in a timely manner. New treatments can then be implemented immediately. This is an example of client-centered care in the community. There are many benefits of this system for both clients and nurses:

- Mobile technology supports community health nurses in their work environment—traveling distances and delivering care in the home setting needs a mobile solution for the care provider.
- Using technology to communicate extends the reach of scarce specialized wound-care experts to clients who require consultation about their wound care, and reduces the burden on clients to travel large distances. It can also reduce the burden on acute-care services.
- Regular consultation with the wound-care specialist helps nurses keep current on best practices, modalities, and products.

Furthermore, clients may feel more involved in their care when they can see the nature of their wound and how healing progresses. Digital images can help support client educations and promote self care.

## Lessons learned in implementing technology

Home care nurses provide care in a unique way. They are mobile, autonomous workers who require tools that can be accessed and used under a variety of work conditions. In order to be successful, the implementation of technology solutions should consider the following.

The technology solution (both software and devices) needs to make sense for the home-care setting and solve real work-life issues for nurses. The devices need to be portable and lightweight, plus have a clear visual display for client teaching and consultant referrals. Because of growing concerns about infection prevention and control, these devices should be able to be easily cleaned as they travel with the nurse.

Key stakeholders, including those who support the service delivery (e.g., visit planners, schedulers, and funders), must be involved to support any process redesign in workflow.

Technology devices need to be selected that can meet the needs of a highly mobile group in all seasons. The software should be easy to use and intuitive.

Project champions are integral to the success of any project. Choose project champions wisely, with equal consideration given to clinical practice skills, leadership qualities, comfort in the use of technology, and availability to provide support to peers.

Despite the prevalence of technology in our daily lives, not everyone is comfortable with using technology in their work with clients. In the implementation of our project, we found that a large number of nurses were uncomfortable with the use of computers and digital cameras. They needed time to gain confidence with the tools (and to learn that pressing a button wouldn't destroy the computer!) and they wanted to feel confident in front of clients with this new way of working. In addition, we found that most nurses experienced a steep learning curve in adopting a new method of assessment and documentation—there is a different way for documenting a wound using software that may be a practice change.

## Overcoming obstacles

To overcome implementation obstacles our experiences suggest the following. Training approaches should be designed to support individual learning needs. One-to-one sessions allow for more personalized training and flexibility for novice technology users. We found that nurses who attended one-to-one sessions expressed less anxiety and frustration with the technology than those who participated in group sessions. If one-on-one teaching isn't possible, groups should be formed

according to the participants' computers skills.

Sufficient on the ground support must be provided, and this should be included in the total training time required for each nurse. We found that those nurses who were anxious about using the technology on their own reduced their anxiety levels when a peer supported them at the point of care.

IT staff can help to design simple technology steps. The biggest stumbling blocks encountered during training and in the early days of implementation were logging on and off, and entering user names and passwords. Simple changes can avoid frustration and the waste of time. For example, choose user names and passwords that cannot be confused, use letters in which the upper

and lower cases look different (b B or D d instead of l i or Cc), and avoid letters that can be confused with numbers (l, I, i, j).

Implementing practice changes using technology can be an exciting venture for home-care nurses. However, attention must be paid to the critical success factors and applying lessons learned from a real-life implementation. This can help smooth the way for home-care nurses to realize the power of technology and influence the way care is delivered in the community. ❖

*During home visits,  
a nurse can make  
an electronic  
referral to a  
community-based  
wound expert  
(enterostomal therapist  
or physician)  
no matter where  
they are located.*

**Nan Cleator, RN, (BN Candidate),** CVAAC has worked in health care for over 25 years in a variety of roles in acute, community and home care. Nan is a National Practice Consultant with VON Canada and has been in this role since 2003. Prior to then, she worked as a front-line nurse and clinical resource nurse for 11 years.

**Irene Holubiec** is Director of Clinical Services at VON Canada where she provides national leadership for clinical practice at VON. Irene has a broad health care background in the hospital sector, private health care consulting and community. She is an active member of nursing associations in Canada.

**Sharon Goodwin** is Vice President of Quality Care & Service, Chief Information Officer at VON Canada. As a member of the senior management team at VON she is responsible for the quality and client services as well as the information systems portfolio for VON. Sharon has a broad background in health care in the hospital, community and private sector.

## References

1. Hebda T, Czar P, Mascara C. *Handbook of Informatics for Nurses & Health Care Professionals*, 3rd ed. Upper Saddle River, NJ: Pearson Education, 2005.
2. Scheinfeld N. *Telemedicine, home care, and reimbursement: legal considerations*. *Ostomy Wound Manage* 2005;51:22-5.