Incorporating Digital Photography into Your Wound-care Practice

BY Kathleen Phillips

The introduction of digital photography is a relatively cost-effective way to document wound care and can be easily incorporated into nursing practice. Some of the positive outcomes of digital photography are the use of the photographs as a teaching tool, improved accuracy of initial and ongoing assessments, and prompt evaluation and feedback to physicians and third-party payers in order to improve outcomes. Barriers to change (i.e, the introduction of digital photography), including confidentiality and privacy issues, will be identified.

Literature Review

There is a lack of published information about digital photography as a best practice in Canada in the assessment of wounds; however, studies from other countries suggest the promise of this technology:

- It is becoming a more common practice in home-care agencies in the United States for nurses to assess and monitor wounds with digital photography and/or video. Chetney and Sauls discuss the use of digital photography and camcorders in their practice, stating that, "The accuracy and detail of a picture can assist in appropriate wound staging and in properly assessing the extent of healing." They report that a telehealth program is also common in the U.S., where it has been shown as a cost-saving measure to decrease supply costs and shorten healing time.[1]
- According to Demarest and Acoraci, "Incorporating digital photography into home care shows promise for improving the quality of wound care, enhancing its availability, reducing costs, and generating valuable outcomes data."[2]
- A more recent article by Buckley, Anderson and Hess[3] outlines a comprehensive program and competency checklist for wound digital photography developed for their agency.
- Fischetti, et al., state, "… nurse imaging program provides the nurse with a powerful tool to strengthen the existing documentation and communication processes of wound-care management."[4]
- The Australian Resource Centre for Healthcare Innovations outlines a project "aimed to standardise the documentation of wounds in an aged care unit by using digital imagery."[5]
- Another innovative proprietary project involves a wireless digital-imaging system that allows specialists to inspect a wound and recommend immediate treatment without actually seeing the patient in person.[6]

Getting Started

After attending a wound-care course at the Chicago Rehabilitation Institute in 2000, I decided to incorporate digital photography as part of the assessment and management of wound care in my practice as a nurse in a home health-care agency. Up until then, I had been taking Polaroid pictures, which were of poor quality and faded with time. There appeared to be a need for better documentation of wound care, specifically for the traumatic wounds that formed the bulk of our practice. We were contracted by the Workers' Compensation Board (WCB) of British Columbia (WorkSafeBC) as well as the Insurance Corporation of British Columbia (ICBC) to provide nursing care,

Kathleen Phillips, RN, BSN, MSc (Nsg Ed), has been in nursing since 1972. She has worked as a staff nurse in medical, paediatrics and critical care; as a nurse educator teaching at the college level; and as a nurse manager in the hospital setting. She is currently an owner-director of a home health-care company in the Fraser Valley, BC.

including wound management. As well, a number of private patients who were not covered under the provincial Medical Services Plan required our services.

The first step was to purchase a digital camera with at least 3.1 megapixels resolution. The one I bought also had a zoom function and a drive for viewing and editing the photos. This equipment was quite expensive at that time. Now most comparable digital cameras are available for under $500 and are already equipped with a variety of programs for editing, printing and saving images.

A computer program was installed to store the images on our computer and set up patient files. Learning to take good quality photographs was a challenge, and my skills improved over time. Initially, the photographs were printed as hard copies and stored in paper files, so good-quality photo paper was needed. We now store photographs electronically on disk. Our general patient consent form was modified to include taking digital photographs of appropriate patients.

The Program

In our agency, the Client Care Manager (CCM) completes the initial assessment on all patients, including wound-care assessments. Once the care plan has been developed, the CCM sees the patient weekly to reassess wound-healing progress. Acute wounds are reassessed weekly, with photos taken to monitor healing. Chronic wounds are reassessed weekly and photographed monthly. Over time, as the number of wound-care patients increased, it became necessary to have our field nurses provide the daily care. The photographs were useful as a teaching tool for the field nurses, especially in regard to severely traumatic wounds. The nurses appreciated knowing what they were going to see during their first visit to the patient, as some of the wounds were quite catastrophic. The CCM would show the photographs and clarify the written dressing procedure with the nurses before they ever saw the patient.

Patients with traumatic wounds often feel that they are not healing as quickly as they would like. Sharing the initial photos and comparing them with the current one enables the patient to see how the wound is progressing toward healing.

As the case managers with WCB and ICBC became more aware of our program, they were able to receive the digital images and add them directly to the patient files via e-mail. When sending the photos via e-mail, the patient was not identified by name, and care was taken not to show any images where the patient might be identified.

WCB Nurse Advisors were excited about having this documentation. They were better able to explain to case managers a worker's inability to return to work and the extent of the injury. In one case, the manager perceived that the worker had a minor thumb injury until the photos showed the extent of the wound, which was not only a thumb injury but a degloving injury of the forearm as well. The photos we send are put on the worker's file and presented at team meetings.

ICBC adjusters and case managers are generally not nurses. With the help of digital photography, they were better able to understand what a dressing procedure entailed and the extent of the patient's injury than they would have by only reading an assessment report.

Many of our patients have had their surgeries in a tertiary care centre, with the follow-up with physicians in the city. We were pleased to see the following request written as part of the wound-care order from the surgeons when they knew we could forward photos to them: "Please send photos." This is popular, in part, because the local physicians can see a photo of the wound without having to take the dressing apart in the office, where they often do not have the required products to redress the wound. Complications that arise post procedure can be followed up very quickly when we send a current photo of the wound to the surgeon. One patient developed a severe hematoma over the entire graft overnight. When the surgeon got our photo, he asked for the patient to be sent to Emergency where he was readmitted for care. This prompt reassessment and forwarding of information with a photograph allows the surgeon see the problem first-hand, rather than relying on the nurses' verbal or written descriptions.

Collaboration with other members of the health-care team is increased when sharing information in such a manner. We not only collaborate and work with the wound care/enterostomal nurse in our local hospitals but with other experts in wound-care clinics outside our region.

Barriers to Change

Despite the benefits of digital photography as a part of wound-care assessment, there are four barriers to incorporating the technology that must be acknowledged. However, I believe these barriers are becoming less of an obstacle.

1. Cost/maintenance of equipment

Digital cameras are increasingly a part of everyday life. Not only is the equipment now more affordable, but it is also easier to learn and use than in the past.

2. Resistance to technology

In the past, nurses have been reluctant to learn new procedures involving unfamiliar equipment. Things have changed, with computers becoming part of the work environment and many innovative assessment and treatment tools being part of the work day.

3. Competency in taking quality photographs

The "development of a systematic procedure and competency for wound photography" is outlined in Buckley, et al.[3] I would highly recommend that agencies considering digital photography incorporate something similar.

4. Confidentiality/privacy issues

Appropriate consent forms that inform the patient that the photographs will be used for treatment and/or educational purposes only, and that confidentiality and privacy will be maintained are a must. Ensuring that no identifying features of a patient are shown in the photo can be accomplished when editing the picture.

Conclusion

In summary, incorporating digital photography as part of your everyday wound-care assessment and practice will provide more accurate assessments and consistent descriptions of wound healing. It will enable better collaboration and information sharing between professionals, thus leading to a positive outcome for the patient. Resistance or barriers to making digital photography part of your wound assessments can easily be overcome.

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Conclusion

Now you have the basic information for healing most wounds. When you achieve the correct balance of all the factors (tissue, moisture, bacterial and chemical balance), you will usually achieve wound healing in a timely fashion. Unfortunately, there can be exceptions. If you do not see improvement after two weeks of optimal wound care, refer your client to a wound-care specialist for further investigations— this will also present another opportunity for you to learn even more about wound healing!

Suggested Readings

The following valuable resources are available free online at www.cawc.net/open/library/clinical/clinical_res.html

- R. Gary Sibbald, RG, Williamson D, Orsted HL, Campbell K, Keast D, Krasner D, Sibbald D. Preparing the Wound Bed — Debridement, Bacterial Balance, and Moisture Balance
- Orsted, HL, Keast D. Principles of Wound Healing,
- Recommendations for Practice: Preparing the Wound Bed (Quick Reference Guide)

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