A Model for Implementing Best Practices in Wound Care in a Hospital Setting

BY Morty Eisenberg

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Introduction

Best practice has become the buzz phrase of this millennium for clinicians, accreditors and quality assurance experts in health-care systems worldwide, and its importance is gaining momentum. Best practice can be described as an integration of evidence-based medicine (the current best research available), expert opinion and patient acceptance.[1] Nowhere is this concept more apparent than in the relatively "new" science of advanced wound care (AWC). AWC is based on principles that are often far removed from traditional medical wisdom. This is because evidence-based research has shown that the old concept of keeping wounds dry and sterile, often through the liberal use of antiseptic agents, does not promote healing. This is particularly true when dealing with compromised wounds with poor healing ability.

Recognizing that AWC improves patient outcomes, the clinical and administrative staff at St. John's Rehab Hospital have strongly supported the adoption of best practices in wound care for our facility. St. John's Rehab Hospital is a 160-bed facility in north Toronto that offers specialized rehabilitation programs for patients with amputations, cancer, cardiac surgery, stroke, multiple trauma and complex musculoskeletal injuries. It is also the site of Ontario's only dedicated burn program and Canada's only organ transplant rehabilitation program. In recent years, many hospitals have responded to the need to provide AWC services by establishing wound-care consultation services and/or wound-care clinics run by qualified practitioners. Our goal was somewhat different. We set out to implement a program that would allow all of our health-care professionals to develop expertise in wound care and prevention.

Assessing Need

Before any significant educational program is undertaken, a learning needs assessment is required to help guide the educational activities and ensure that the needs of the audience are met. A variety of techniques and sources can be used for assessing need, including surveys, questionnaires, interviews, new technologies and professional standards or requirements.[2] In our facility, it was the attainment of professional standards that guided our program. It was understood that we would be teaching an inter-professional group that included nurses, physicians, physiotherapists, occupational therapists, chiropodists, pharmacists and dietitians. Because the most frequent type of wound encountered in our facility is the pressure ulcer, we decided to focus our initial efforts on AWC principles as they relate to the prevention and treatment of pressure ulcers.

Goals/Objectives

Once the need was established, several goals were formulated to ensure our success (Table 1). A number of educational objectives were also developed to help us meet our ultimate goal of establishing best practice for the prevention and treatment of pressure ulcers. Our aim was to ensure that, following completion of the education program, clinical staff would be able to achieve the six objectives listed in Table 2.

continued on page 34

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TABLE 1

Goals formulated to establish a successful wound-care program

1. Creation of a hospital interprofessional wound-care committee
2. Implementation of an inpatient wound consultation service
3. Introduction of the Braden Scale on all clinical units
4. Modifications to the hospital wound-care formulary
5. Development and institution of an interprofessional, multifaceted education program, with an initial focus on the prevention and treatment of pressure ulcers. Special attention was paid to utilizing principles of adult learning theory.

Implementation

In January 2006, our Medical Advisory Committee mandated the creation of the Advanced Wound Care Committee (AWCC). This interdisciplinary committee was composed of 15 members representing seven clinical disciplines: medicine, nursing, physiotherapy, occupational therapy, chiropody, pharmacy and dietary services. The first order of business was organizing a baseline point-prevalence study of pressure ulcers in our hospital and introducing the Braden Scale for Predicting Pressure Sore Risk on all inpatient units. The AWCC also monitored the development and implementation of our multidisciplinary educational program and began work on a hospital-wide wound-care formulary.

Soon after the AWCC was established, an inpatient wound consultation service became operational. Besides helping to manage patients with difficult wounds, consultations provided an ideal opportunity for one-on-one wound-care teaching.

The initial point-prevalence study was completed to give us a sense of the magnitude of our pressure ulcer problem. The purpose of a point-prevalence study in this area is to determine the percentage of patients with pressure ulcers in a facility at one point in time.[5] Not only does this information provide insight into the magnitude of the problem, but it is very useful for monitoring the effectiveness of wound-prevention programs. A second pressure ulcer point-prevalence study was carried out 11 months later, and a third and final study was carried out at 19 months to gauge program effectiveness—specifically pressure ulcer prevention.

Following a thorough nursing in-service program, the Braden Scale for Predicting Pressure Sore Risk assessment tool was introduced for use on each clinical unit. This screening tool demonstrates good sensitivity and specificity when determining pressure ulcer risk.[5] Now, every patient admitted to our facility is assessed for their risk of developing pressure ulcers, and appropriate preventative measures are put in place for those who require them.

The main focus of our strategy to achieve best practices in wound care was the education program, and much time and effort was spent on its design and execution. Our target audience was the entire hospital clinical staff. In order to capture as many staff as possible (taking into account shift work and holidays), the seminars were repeated weekly for a month. Each seminar consisted of an identical one-hour, interactive PowerPoint presentation and was preceded by a pre-test and finished with a post-test and evaluation.

For each seminar we tried to create an informal atmosphere and utilize interactive learning techniques

TABLE 2

Educational objectives

1. Identify factors that can be modified to provide an optimum environment for the prevention of pressure ulcers (surfaces, moisture and incontinence, pain control, level of activity, nutritional factors and patient education)
2. Diagnose and stage pressure ulcers
3. Document the description of a typical wound using recognized wound-care terminology
4. Assess the condition of the wound bed for tissue debris, infection and moisture balance
5. Demonstrate the appropriate use of wound-care products to promote the healing of pressure ulcers (knowledge and skill)
6. Recognize the importance of treating the whole patient, not just the wound

to maximize interest and thus learning potential. An outline of the seminar content is provided in Table 3.

Our educational program was both repetitive and multifaceted. It included seminars, hands-on workshops, hardcopy educational material on all clinical units and the hospital intranet, and distribution of enablers to all clinical staff.

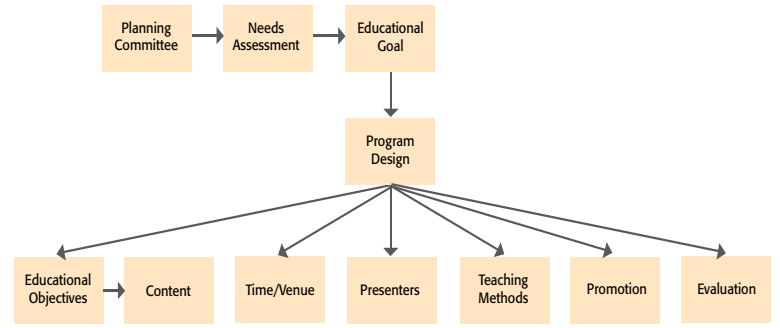
Results

As previously mentioned, our initial education program consisted of four identical, one-hour, interactive PowerPoint presentations. Each session began with a pre-test and finished with a post-test and seminar evaluation. Attendance was taken at each seminar. A total of 77 staff attended the presentations (approximately 60 per cent of eligible staff). The pre- and post-tests were identical, and the data collected gave us a rough measure of information learned by the participants during the presentation. The average pre-test score was 48.3 per cent, and the average post-test score was 66.3 per cent. Note that this did not give us data about information retention (beyond the hour) or whether information learned was translated into improved clinical practice.

With respect to seminar evaluations, 39 per cent of respondents felt the presentations were excellent, 53 per cent felt they were good, and eight per cent believed them to be average in quality. When asked what could be done to make the seminars more effective, the most common response was a request to make the sessions more interactive and show more practical examples.

The initial point-prevalence study of facility-acquired pressure ulcers was performed in our hospital before the start of the project and reported a rate of 14.2 per cent. The second point-prevalence study, done 11 months into the program, reported a modest reduction, with a rate of 13 per cent. The final point-prevalence study, done 19 months into the program, reported a substantial 36 per cent reduction in pressure ulcer prevalence (from the start of the program) with a rate of nine per cent. (It should be noted that, although National Pressure Ulcer Advisory Panel guidelines for pressure ulcer staging were used, data collection in each study was completed by different assessors.)

FIGURE 1



Educational program design.

Discussion

To plan an effective education program a number of steps are required, as well as sufficient time to complete the project. Often several months are necessary for proper program development.[2] The schematic in Figure 1 outlines an example of how an effective program can be created.

Adult learning principles

On acceptance of this project, I believed its focus would be on the fundamental concepts of AWC. In fact, this was only partially true. On further reflection it became clear that in order to implement this program effectively, we

TABLE 3

Outline of wound-care seminar

1. Program outline (agenda)
2. Program objectives
3. An introduction to the terms "best practice" and "advanced wound care"
4. Pressure ulcer overview (pathophysiology, anatomic locations and ulcer staging)
5. Pressure ulcer prevention using pressure off-loading techniques
6. Local wound care (TIM)
7. Wound-dressing principles based on function and absorptive capacity
8. Proper wound description based on a modified "MEASURE" tool
9. Pain management principles
10. Nutritional issues in wound healing

continued on page 36

TABLE 4

The six *Rs* of adult learning

Responsibility	■ Adult learners are self-directed and take responsibility for their learning.
Respect	■ Adult learners participate in diagnosing their educational needs. ■ They provide a wealth of experience to enhance learning. ■ They require a safe learning environment (intellectual, emotional, and physical).
Relevance	■ Adult learners have to "buy-in" for effective learning to occur. ■ They are interested in knowledge and skills required to perform evolving life tasks or to cope better with problems. ■ Learning orientation is problem-centred (relevance is easier to grasp).
Reward	■ The prime motivator is the application of knowledge/skills to solve an immediate problem. ■ Motivators are usually internal: self-esteem, achievement, need to know and curiosity.
Reciprocal learning	■ Effective learning involves a two-way flow of information. ■ Learning is enhanced and memory retention improved through the use of interactive learning techniques.
Reflection	■ Adults learn best through reflecting on experiences.

needed to develop an understanding of adult learning theory and be able to relate it to health professionals. Adult learning has evolved as a science over recent decades, and a number of principles are of value when planning an effective adult education program (Table 4).

When designing our education program, we tried to utilize many of these learning principles to enhance the educational experience for the audience. The learning needs assessment ensured the curriculum was relevant for all of the clinical disciplines invited. Each program began with an agenda outlining the organization of the presentation and a clear list of objectives outlining what we expected each participant to achieve by the end of the session. We encouraged comments and feedback that allowed participants to share their experiences and feel valued. Many interactive techniques were used, including case studies and audience participation.

Adult learning theory tells us that students are individuals and many learn best using alternative formats. Thus, we ensured our program was multifaceted and included seminars, hands-on workshops, hardcopy materials, enablers, Internet learning and one-to-one learning through the consultation service. The pre-test and post-test allowed us to gauge information learned and helped us to assess the validity of our educational process. Finally, participants evaluated the seminars to provide us with feedback to help us improve future educational sessions.

In our zealousness to cover as much information as possible in a one-hour seminar, I believe our desire for optimal interactivity suffered. This fact was mentioned in a number of evaluations, and it was suggested as an area for improvement in future sessions.

Responding to feedback

In response to this, two new seminars were held in January 2007. The same material (though less) was covered and the audience make-up was unchanged. The only difference was a greater focus on interactive techniques (Table 5).

continued on page 38

TABLE 5

Interactive techniques used in the January 2007 seminars

Stand up and be counted	The audience was asked demographic questions
Question and answer	A debridement quiz (three questions)
Case studies	A presentation case—an amputee with an ulcer on his one remaining leg
"Buzz groups"	Use of small groups to discuss the treatment of an unknown ulcer
Brainstorming	Listing and discussing audience treatment choices
Handouts	PowerPoint slides with spaces for notes were handed out before the seminar

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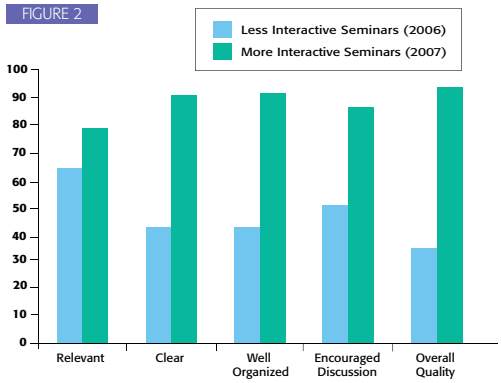
FIGURE 2



Comparison of evaluations between the April 2006 and January 2007 seminars. The graph shows the percentage of respondents that chose "strongly agree" or "exceeds expectations."

A total of 95 participants registered for these seminars. In comparing the evaluations for the two series of seminars (Figure 2), it is clear that audience satisfaction was higher for all measured criteria in the more interactive workshops in January 2007.

A review of educational strategies to enhance learning in the health professions by Sibbald et al. concluded that primary strategies (conferences and other forms of didactic learning) are passive forms of learning that are not very effective in promoting retained knowledge or improving clinical practice. Furthermore, they found that secondary strategies (also known as enablers or reinforcers) promoted interactivity and resulted in significantly higher knowledge retention.[3]

After a thoughtful review of what we set out to accomplish and the goals achieved, a number of final comments can be made (Table 6). We designed and implemented this model with the intention of establishing best practices in wound care in our hospital. With a significant reduction in pressure ulcer prevalence within two years of instituting our program, we believe our program has merit and are optimistic that we will become known as a centre of excellence in wound care.

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TABLE 6

Take-home messages

- The introduction of an advanced wound-care program can only be successful in an environment where hospital administration and clinical management are supportive.
- A well thought-out and organized implementation plan is mandatory for establishing a successful education program.
- Wound-care education is an ongoing process, and learning is best achieved when attention is paid to adult learning principles.
- Advanced wound care is an interprofessional specialty, and patient outcomes are improved when a team approach is used.
- The wound-care practitioner has an obligation to pass on new knowledge and skills to other members of the wound-care community.

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