CLINICAL MANAGEMENT

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Educating Nurses in the United States about Pressure Injuries

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Editor's note: In response to the 2016 recommendations of the National Pressure Ulcer Advisory Panel, the authors use the term "pressure injury" rather than "pressure ulcer." Some of the comments and questionnaires reviewed in this article, however, predate the change, and the authors use the original term "pressure ulcer" in those instances. Thus, pressure injury and pressure ulcer will be used interchangeably in this article.

GENERAL PURPOSE:

To provide information about the current state of educating nurses about wound care and pressure injuries with recommendations for the future.

TARGET AUDIENCE:

This continuing education activity is intended for physicians, physician assistants, nurse practitioners, and nurses with an interest in skin and wound care.

LEARNING OBJECTIVES/OUTCOMES:

After participating in this educational activity, the participant should be better able to:

1. Discuss the importance of pressure injury education and wound care for nurses and identify the current state of nursing education on the subject.

2. Identify strategies that can be used to put improved wound care and pressure injury education into practice.

ABSTRACT

Wound care nursing requires knowledge and skill to operationalize clinical guidelines. Recent surveys and studies have revealed gaps in nurses' knowledge of wound care and pressure injuries and their desire for more education, both in their undergraduate programs and throughout their careers. Data from baccalaureate programs in the United States can pinpoint areas for improvement in nursing curriculum content. Lifelong learning about wound care and pressure injuries starts with undergraduate nursing education but continues through the novice-to-expert Benner categories that are facilitated by continuing professional development. This article introduces a pressure injury competency skills checklist and educational strategies based on Adult Learning principles to support knowledge acquisition (in school) and translation (into clinical settings). The responsibility for lifelong learning is part of every nurse's professional practice.

KEYWORDS: Adult Learning, Benner's novice-to-expert model, competency checklist, curriculum, nursing education, pressure injury, wound care

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INTRODUCTION

Pressure injuries (formerly known as pressure ulcers, pressure sores, decubitus sores, decubitus ulcers, decubiti, and bedsores) have been an important concern of nurses ever since Florence Nightingale linked these wounds to the nursing process.[1] The effectiveness of pressure injury education and subsequent knowledge translation into nursing can be directly linked to patient outcomes and care quality. Although prevention and treatment of pressure injuries require a multiprofessional approach and processes that support best practices, pressure injuries are considered specifically a nurse-sensitive indicator by the US National Database of Nursing Quality Indicators.[2]

Furthermore, hospital-acquired pressure injury rates are part of the performance evaluation of a hospital for Magnet status.[3] Magnet hospitals must demonstrate performance that places them in the top half of the benchmarked data set, including nurses' knowledge of pressure injury prevention.[3] Most American clinicians are also aware that since October 1, 2008, the Centers for Medicare & Medicaid Services no longer reimburse hospitals at a higher rate for any pressure injury that occurs during hospitalization.[4] Therefore, prevention, documentation, assessment, and treatment of pressure injuries are critical components of nursing care. This implicates all nursing practice—not only wound care specialists.

In the following section, the authors review data that illustrate the current level of nurses' knowledge regarding pressure injuries. This is followed by the authors' research on pressure injury content in undergraduate baccalaureate programs (knowledge acquisition). Finally, the authors will discuss knowledge translation into practice, beginning with the new graduate and continuing throughout the nurse's career.

NURSE KNOWLEDGE OF PRESSURE INJURIES

Research conducted in the United States has demonstrated that nurses (both wound-certified and not) have limited "C and C+" levels of pressure injury knowledge based on their Pieper pressure ulcer knowledge tool average scores.[5,6] However, this is higher than the "D" level of pressure injury knowledge assessed for medical residents[7] and similarly low scores for physicians.[7–10] Various authors have also reported limited nurse knowledge of pressure injury care in the United States[11–14] and internationally in other countries, including Brazil,[15–17] Canada,[18] Ethiopia,[19] Greece,[20] Iran,[21] Nigeria,[22,23] and Sweden.[24] Pressure injury knowledge surveys can help identify unmet needs and identify the reasons for the knowledge gap.

Results from Wound Care Surveys in the United States and Canada

In 2 previous generalist nursing journal wound care surveys,[25,26] nurses had difficulty answering some of the questions about pressure injuries. This included a question that asked about the use of the Braden Scale to assess a patient's potential to develop a vascular ulcer. Slightly more nurses in 2012 (62%) identified that this was a false answer than in 2005 (56%).[26] There are 3 possible reasons for the low scores:

- lack of knowledge that the Braden Scale for Predicting Pressure Ulcer Risk is not designed to assess vascular ulcers

• respondents did not read the question carefully
• respondents did not carefully read the word "vascular"

Most nurses correctly answered that Stage 1 pressure ulcers were not easy to identify in persons with darkly pigmented skin (96%), but 91% incorrectly indicated that all patients at risk of pressure ulcers should be turned and repositioned every 2 hours rather than knowing that the repositioning frequency has to be individualized for each patient based on the type of support surface the patient is on and other patient characteristics.[26] Although the majority of nurses (88%) correctly responded that a full-thickness tissue loss pressure ulcer was a Stage 3 or 4, nurses were less confident identifying the 6 pressure injury stages (55%).[26] Even though pressure injuries are a nurse-sensitive indicator, amazingly, only a little more than one-third of the responding nurses knew their unit's (38%) or their facility's (36%) pressure ulcer incidence rate.[26]

Based on these results, the authors decided to take a closer look at what accounts for these information deficits. Does this knowledge gap start with nursing education content?

The State of Education

Nurses had a lot to say when asked about wound education. Only 30% said their wound care education was adequate in 2005,[25] and 31.5% agreed in 2012.[26] The number of years of nursing experience influenced their responses, with only 23% of experienced nurses with more than 20 years' practice answering yes and a higher number of recently graduated nurses (2–3 years' experience) responding yes (43%).[26]

This question also received the most write-in comments, including the lack of content on pressure ulcer care in nursing school, the need for "hands-on" workshops, and educational programs on wound care.[26] Unfortunately, Soban et al[27] continue to report that not all care facilities require a yearly continuing education program for nursing staff that addresses knowledge gaps identified in needs assessments, including pressure ulcers.

KNOWLEDGE ACQUISITION: UNDERGRADUATE NURSING EDUCATION

Because some nurses believe that there is a lack of pressure injury preparation in undergraduate nursing education, a literature review was conducted to examine what nurses are taught, what content is in the required textbooks, and what innovations can be introduced to improve nursing wound care education.

Nursing Textbooks

A 1993 study of fundamentals of nursing and medical-surgical nursing school textbooks identified wound care content depending on the textbook selected by the school. Students could be exposed to as little as 200 lines of pressure ulcer–related text.[28] Furthermore, content was scattered over 3 to 7 chapters and was incomplete and even inaccurate.[28] When others replicated this textbook review many years later, 1 textbook had as few as 45 lines of text on pressure ulcers; whereas another had more than 1300 lines with content that was organized and complete and included research findings.[29]

Improving nursing textbooks is one way of making pressure injury prevention programs more important at the formative nursing student level. To successfully translate this new knowledge into practice, textbook content needs to be combined with a variety of learning methods including interactive laboratory simulations and web-based modules, learning portfolios to stimulate reflection on clinical experience, and smart technology to improve pressure injury practice.[29,30]

In addition to multimodal learning materials, students must internalize wound care knowledge. For example, clinical experience can be documented in student/healthcare professional learning portfolios as outlined from a Cambridge conference on medical education.[31] Students taught to reflect on clinical experience will enhance their knowledge base and increase their ability for lifelong learning.

Pressure Injury Content in Nursing School

As part of a survey of wound care content in undergraduate baccalaureate nursing programs, specific content questions about pressure ulcers were also included.[32] Faculty from all 50 states and the District of Columbia were invited to participate; 77 faculty from 33 states returned the survey.[32,33] Results of the previously unpublished data are found in Table 1; several curriculum deficiencies were identified.

Not all faculty were teaching pressure ulcer risk assessment with a validated tool (85.7% were, but 14.3% were not) or prevention protocols (85.7%). Just under two-thirds of the programs were teaching incidence and prevalence rates (62.7%), use of pressure redistribution cushions (61%), delivery of pressure redistribution using support surfaces (74%), and applicable regulatory issues (58%), and pressure injuries in palliative and long-term care were taught by 56% and 57% of faculty, respectively. Staging pressure ulcers was taught by 87% of the respondents.[33] Inconsistencies also exist between laboratory and clinical teaching. Clearly, some important content is often missing in the curricula. These results indicate a need for nursing faculty and programs to reexamine pressure injury content.

A study by Huff[34] illustrates the difference that including specific education on wound and pressure injuries can make for undergraduate nursing students. Huff compared the test scores of 65 undergraduate nursing students (intervention group) in their second year of study who received an additional 3-hour lecture and laboratory-based experience by a nursing specialist

Table 1.
FACULTY PERCEPTION OF PRESSURE INJURY CONTENT IN UNDERGRADUATE NURSING PROGRAMS (N = 77)[a]

Content Area	% (n)
General Nursing Related to Pressure Ulcers (PrUs)	
Positioning	90.9 (70)
Transferring patients	81.8 (63)
Lifting patients	83.1 (64)
Specific PrU Knowledge	
PrU assessment with a validated tool	85.7 (66)
PrU incidence and prevalence rates	62.3 (48)
PrU prevention protocols	85.7 (66)
Documentation of PrU characteristics	92.2 (71)
Staging PrUs	87.0 (67)
Regulatory and legal processes related to PrUs	58.4 (45)
Pressure redistribution using support surfaces	74.0 (57)
Pressure redistribution using cushions	61.0 (47)
Pressure redistribution using turning	80.5 (62)
Pressure redistribution using repositioning	83.1 (64)
Specific PrU Skills	
PrU risk assessment taught in lab	70.1 (54)
PrU risk assessment taught in clinical	87.0 (67)
Staging a PrU taught in lab	64.9 (50)
Staging a PrU taught in clinical	76.6 (59)
Cleaning a PrU taught in lab	68.8 (53)
Cleaning a PrU taught in clinical	81.8 (63)
How to work specialty bed taught in lab	26.0 (20)
How to work specialty bed taught in clinical	79.2 (61)

[a]Portions of these data were presented as a poster at the American Academy of Nursing Annual Conference 2009. The authors gratefully acknowledge the assistance of Sonya Rani Choudhury, BS, RN, and Nina Shabbat, BA, for facilitating the data collection.

with scores from 55 undergraduate students in their first year (control group) who did not.[34] The 10-question knowledge assessment test included questions on pressure ulcers. The mean score for the intervention group was 84% ± 13.2%, compared with the control group, 73.6% ± 13% (P = .000003).[34]

The Curriculum of the Future

What wound care knowledge nurses are taught and bring to practice in general[25,26,32] and about pressure ulcers[33–36] specifically is an important step in understanding how to enhance the nursing care of those at risk or who have developed a pressure injury. To this end, the National Pressure Ulcer Advisory Panel (NPUAP) revised its original registered nurse (RN) competency-based curriculum on pressure ulcer prevention in 2013.[35] Its purpose is to assist nurses and other clinicians as they develop RN pressure injury educational programs. The curriculum consists of 11 major competencies and objectives that are listed in Table 2. Because pressure injuries are a nurse-sensitive indicator and quality-of-care issue, all nursing programs should include the important elements of pressure injury prevention and care as delineated by the NPUAP.

Nursing programs should also consider retaining faculty with specialized skin and wound care knowledge, wound care–certified faculty, or, at the minimum, using expert faculty in a consultative role. Clinical experiences for senior nursing students in leadership courses should include direct experience with institution-led initiatives to improve the quality improvement process and pressure injury incidence. These improvements in curriculum and staffing may also get student nurses interested in wound care as a speciality.[37]

KNOWLEDGE TRANSLATION: PUTTING EDUCATION INTO PRACTICE

After graduation, nurses are challenged to translate their acquired knowledge and skills into everyday practice. Discussion of the

Table 2.
NPUAP REGISTERED NURSE COMPETENCY-BASED CURRICULUM: MAJOR PRESSURE ULCER PREVENTION COMPETENCIES AND OBJECTIVES[35]

- Understand pressure ulcer incidence and prevalence.
- Identify etiologic factors contributing to pressure ulcer occurrence.
- Conduct a structured risk assessment on admission, and repeat as regularly and as frequently as required by patient acuity and setting.
- Ensure that a complete skin assessment is part of the risk assessment screening policy in place in all healthcare settings.
- Develop and implement an individualized program of skin care.
- Demonstrate proper positioning/repositioning for pressure ulcer prevention/treatment.
- Choose an appropriate support surface for a patient based on risk and the patient's attributes.
- Implement nutritional interventions as appropriate to prevent pressure ulcers.
- Accurately document results of risk assessment, skin assessment, and prevention strategies.
- Apply critical thinking skills to clinical decision-making regarding the impact of changes in the individual's condition on pressure ulcer risk.
- Make referrals to other healthcare professionals based on patient assessment.

emerging science of knowledge translation is beyond the scope of this article. However, some important works in implementation science that are not specific to pressure injury but that can be extrapolated to this specialty can be found in the work of Grimshaw et al.[38,39]

Benner's Novice-to-Expert Model

Although not specific to pressure injuries, the classic work of Patricia Benner[40] is still applicable today in assessing how the new nurse can translate his/her undergraduate education into everyday practice (Figure). Dr Benner adapted and tested the Dreyfus Model of Skill Acquisition for nurses. This model "takes into account increments in skilled performance based upon experiences as well as education."[40] This framework provides both a basis for clinical knowledge development and nursing career progression. In this model, 5 levels of proficiency are outlined: novice, advanced beginner, competent, proficient, and expert.

As a novice nurse, Benner writes that "beginners have no experience with the situations in which they are expected to perform tasks."[40] Novices are driven by rules and do not have the ability to use judgment as they lack experience with new clinical practice situations. They cannot contextualize unknown situations due to lack of experience or use previous experience to guide their interventions and practice actions.[40] Therefore, many hospitals have developed internships or transition-to-practice programs to mentor new graduates in their first employment positions. It also provides an opportunity for objective assessment of the new nurse's ability to actually perform essential aspects of care that have been outlined in clinical practice guidelines (eg, pressure injury care).

Assessing a nurse's competency to actually perform in the clinical setting, which began in their undergraduate learning experience, is important during this orientation period. Competency (an ability or skill) will be interpreted by the authors as a set of defined behaviors that provide a structured guide enabling identification, evaluation, and development of the behaviors of the individual. Whenever performance assessment of competency is undertaken, the nurse should always know what criteria are used. Therefore, a group of wound care experts has proposed a competency checklist for both the patient care nurse and the nurse manager regarding pressure injury as developed as part of a wound competency checklist (Tables 3 and 4).

Another way to understand competency is to speak with those who have achieved it. Much can also be learned from the lived experience of a novice nurse, so the authors have included that perspective in *A New Nurse's Perspective*.

Continuing Education

Competency assessment is important, but it must be accompanied by continuing education. In Benner's[40] model, the nurse moves

Figure.
EDUCATION MODEL FROM BASIC PROFESSIONAL EDUCATION THROUGHOUT NURSING CAREER

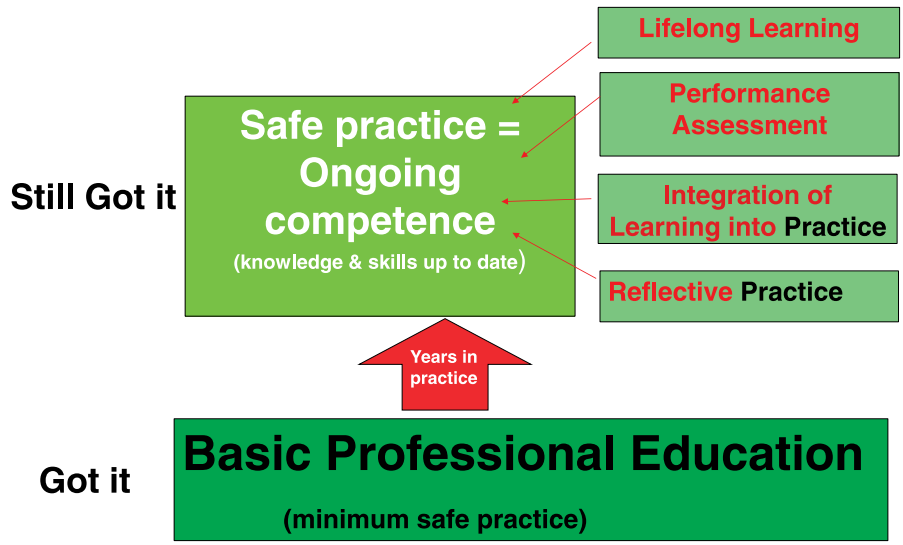

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Table 3.

PRESSURE INJURY COMPETENCY CHECKLIST—DIRECT CARE PROVIDER

Employee name:	**Date:**
Evaluator name:	**Title:**

Pressure Injuries

Performance Criteria	Met	Not Met
Prevalence and Incidence		
• Can state nursing unit's pressure injury incidence and prevalence rate		
• Can describe the unit's pressure injury prevention action plan		
Risk Assessment		
• Completes pressure injury assessment tool (eg, Braden Scale) accordingly to hospital/facility policy		
• Performs a comprehensive assessment to determine patient's/resident's risk for pressure injury development including:		
Review low subscale scores (eg, Braden) to develop a plan of prevention interventions		
Skin assessment		
Patient/resident risk factors, eg, comorbidities, medications, etc		
• Implements appropriate pressure ulcer prevention interventions based on the individualized patient/resident assessment that can include:		
Pressure redistribution		
Repositioning		
Skin care and protection		
Nutrition		
Moisture		
Shear		
• Communicates patient/resident pressure injury risk during handoff and to other members of the healthcare team		
Pressure Injury Classification		
• Differentiates pressure injury from other skin injuries, eg, skin tears, moisture-associated skin damage, venous ulcers, etc		
• Accurately stages pressure injury(ies) using the NPUAP classification system		
• Can identify all 6 stages of pressure injuries		
• Documents assessed pressure injury characteristics as per hospital/facility policy which may include the following:		
Wound size Wound base Wound edges Wound drainage Edema Pain		
Signs and symptoms of infection		
Pressure Injury Treatment		
• Cleanses pressure injury per hospital/facility policy		
• Applies/changes dressings (when ordered) per hospital/facility policy		
• Assesses pressure injury(s) for signs and symptoms of infection		
• Documents any pressure injury treatments and assessments for changing status (healing or worsening)		
• Communicates pressure injury assessment and treatment with physician and appropriate members of interprofessional team		

Abbreviation: NPUAP, National Pressure Ulcer Advisory Panel

Table 4.

PRESSURE INJURY COMPETENCY CHECKLIST—NURSING MANAGERS

Employee name:	**Date:**	
Evaluator name:	**Title:**	
Committee Participation/ Policy and Procedures/Leadership		
Performance Criteria	**Met**	**Not Met**
Attends hospital/facility-wide skin/wound committee meetings		
Provides feedback to hospital/facility-wide skin/wound risk assessment department		
Ensures that skin injuries/ulcers/wound policy and procedures are accurate and up-to-date with the most current Centers for Medicare & Medicaid Services regulations, evidence, and clinical guidelines		
Coaches/mentors staff in prevention, assessment, and management of various skin injuries/ulcers (pressure ulcers, venous ulcers, moisture-associated skin damage, diabetic foot ulcer, skin tears)		
Coordinates ongoing staff education/training for new employees and continuing employees on a regular basis		
Provides resources for staff to implement prevention and treatment care		
• Advocates for resources to senior leadership • Develops business plans, when needed, to secure required resources		
Makes wound rounds with wound care experts and staff on a regular basis Creates evidence-based action plans to meet appropriate outcomes for all skin and wound conditions		
• Uses a systems approach to redesign care and improve outcomes		
• Addresses individual issues through education and counseling		
Pressure Injuries		
Performance Criteria		
Prevalence and Incidence		
• Monitors incidence/prevalence rates both hospital/facility-wide and nursing unit specific		
• Monitor's staff adherence to unit's pressure injury prevention action plan		
Risk Assessment		
• Monitors staff adherence to completing pressure injury assessment tool (eg, Braden Scale) accordingly to hospital/facility policy		
• Evaluates staff ability to perform a comprehensive assessment to determine patient's/resident's risk for pressure injury development including:		
Any low subscale scores		
Skin assessment		
Patient/resident risk factors, eg, comorbidities, medications, etc		
• Evaluates staff implementation of appropriate pressure ulcer prevention interventions based on the individualized patient/resident assessment that can include:		
Pressure redistribution		
Repositioning		
Skin care and protection		
Nutrition		
Moisture		
Shear		
• Monitors staff communication of patient/resident pressure injury risk during handoff and to other members of the healthcare team		

(continues)

Table 4.
PRESSURE INJURY COMPETENCY CHECKLIST—NURSING MANAGERS, CONTINUED

Performance Criteria	Met	Not Met
Pressure Injury Classification		
• Monitors staff performance of ability to differentiate pressure injury from other skin injuries, eg, skin tears, moisture-associated skin damage, venous ulcers, etc		
• Monitors staff accuracy of all 6 pressure injury(ies) stages using the NPUAP classification system		
• Monitors staff documentation of pressure injury characteristics per hospital/facility policy		
Pressure Injury Treatment		
• Monitors staff performance of ability to cleanse pressure injury per hospital/facility policy		
• Monitors staff ability to apply dressings (when ordered) per hospital/facility policy		
• Monitors infection rates of pressure injury(ies)		
• Monitors staff adherence to documentation of any pressure injury treatments and assessments for changing status (healing or worsening)		
• Evaluates effectiveness of pressure ulcer status communication across the interprofessional team		

Abbreviation: NPUAP, National Pressure Ulcer Advisory Panel.

from reliance on abstract principles to the use of past experience. Therefore, the education of today's nurse is never complete! In order to keep up with the ever-changing demands of practice, today's nurse is a lifelong learner who must continue his/her journey of knowledge and skill acquisition (Figure).

Nurses need regular pressure injury educational sessions with competency documentation. Performance checklists, including the section on pressure injury (Tables 3 and 4) that are part of the *Wound Care Competency Checklist—Direct Care Provider*, can be a useful tool to objectively evaluate ability to care for patients with a pressure injury after educational intervention.

STRATEGIES TO IMPROVE EDUCATION

The authors have identified several gaps in nursing education and established that education must continue for nurses in practice.[26] Several studies have evaluated existing educational or quality improvement efforts to improve nurse knowledge and practice in pressure injury prevention.[35,41]

First, targeted programs can address gaps in knowledge. For example, Gunningberg et al[24] calculated that both RNs and student nurses had higher scores than did "assistant nurses" on pressure injury etiology and causes. All groups had the highest scores in nutrition and risk assessment with lowest scores on reduction in amount of pressure and shear. [24] Pressure injury classification/clinical observation was lowest for registered nurses and student nurses, with etiology and causes lowest for "assistant nurses".[24] The authors recommend that targeted education on pressure injuries for nurses in practice begins with these subjects, and instructors examine their curricula for gaps where these deficits may arise.

The historical ways of delivering pressure injury prevention and treatment education, including classroom-based training that takes nurses off their unit to provide the necessary education, or short, on-unit sessions that compete with nurses clinical care duty to the patient, may not be the most effective delivery method.[30] Embracing more "just in time" interactive educational methods, including mobile phone apps,[33] is one answer as nurses prepare to meet the needs of patients at risk of or living with pressure injury.

Another innovative education methodology is app technology. Raipaul and Acton[30] report on the use of smart app technology to deliver pressure injury education with 5 bite-sized modules (on prevention, classification, treatment, equipment, and risk assessment). The long-term-care facilities studied had 100 days free of avoidable pressure injuries, but after the education program, this increased to more than 200 days.[30]

Teaching should include high-quality educational evidence such as randomized controlled trials. This can be complemented by rich, qualitative nursing education research. An examination of this educational evidence base can help construct a continuing education nursing framework for pressure injury prevention and treatment.[42]

In a 1995 systematic review of randomized controlled trials on educational methods, Davis et al[42] determined that "didactic sessions do not appear to be effective in changing physician performance"; this finding can be extrapolated to nursing education. This study also concluded that "Only interactive and mixed educational sessions (practice skills) can effect change in practice and on occasion healthcare outcomes."[42] This meta-review included 99 trials with 160 interventions. The research team determined 101 of the interventions improved knowledge, with 70% changing physician performance and 48% incurring positive change. The strategies that changed performance the most were reminders, patient-mediated interventions, outreach visits, and opinion leader training.

Less effective in general are passive techniques, such as audit with feedback or the distribution of educational materials. Furthermore, professional conferences have little impact without:

- linking new knowledge to the bedside and direct patient care; and
- reinforcement, or help when a new practice does not work by including an expert colleague or an interprofessional team member who can assist in the fine-tuning of a new practice.

Educational Process

Classroom teaching should be interactive and nonthreatening. There are several methods to make large-group teaching more interactive, as illustrated in Table 5.

The educational process should also include

- a course committee of educators, teachers, students, and representatives from the healthcare system;
- a needs assessment that may include healthcare error reports, prevalence-incidence data, student surveys, and institutional performance or accreditation data;
- a longitudinal and interactive format with situational learning at the bedside;
- practice in skills and attitudes; and
- evaluation that is both formative and summative, with ratings and focus group data for quality improvement and feedback to the course committee, completing the educational loop.

These general principles gleaned from the work of Davis et al[42,43] and Grimshaw et al[38,39] are applicable to wound care and pressure injury. This is supported by a recent study on pressure injury education[22] that concluded that blended education strategies are more effective for adult learners.

Table 5.
EDUCATION STRATEGIES

#	INTERACTIVE METHOD	DESCRIPTION
1	Pretest-posttest	Test before and after an educational event to measure improved knowledge
2	Pop quiz	Can give instant feedback on class knowledge
3	Question cards	Enables the facilitator to cover a large number of questions, avoiding a few students dominating the discussion, and creates a nonthreatening environment
4	Voting strips	Can instantly measure student knowledge based on color or the number of coded responses; the teacher can assess the answers and spend more time on a concept if there is a rainbow of colors indicating low knowledge base
5	Touch pads	Instant voting system with clickers and/or computer programs
6	Readings	Students read an abstract or part of an article and comment
7	Buzz groups	Small group discussions to reach a consensus/answer a question/approach a problem
8	Discussion	Pick a controversial topic to discuss or a concept not well understood
9	Think pair share	Students develop an individual answer to a question, then share their thoughts with a neighbor for consensus and with class as a whole
10	Debates	Opposing opinions supported by class members; students debate and then have a general class vote on the outcome or discussion of strengths and weaknesses
11	Talk show host	Hand the microphone to a student and ask for an opinion, then ask another class member if he/she agrees
12	Progressive patient problem	Give a patient scenario and, based on the correct answers, ask for the next steps in history, physical exam, or management
13	Patient-related interventions	Have a patient come to class and discuss his/her illness, answer questions from the class with facilitated discussion
14	Video vignettes	A 30–120 second segment illustrating patient characteristics, clinical signs, diagnostic tests, etc.

A NEW NURSE'S PERSPECTIVE

Wendy Harris Jicman, BSN, BSHS, RN

I consider myself fortunate because I had a strong educational wound care experience in my baccalaureate nursing program. After a nursing textbook switch in my initial nursing fundamentals course, the content was current and complete. Lectures included the important principles of pressure injury care, including risk assessment using the Braden Scale, NPUAP pressure injury staging, prevention, and treatment plans. At the clinical site, a long-term care facility, classroom education was put into practice with opportunities to assess, care for, and discuss pressure injuries. This included cleansing the injury, measuring it, determining the undermining, tunneling positions, and redressing pressure injuries based on the providers' orders. Open discussions were encouraged, including risk assessment and treatment options.

This clinical experience gave me the opportunity to translate all this information into the reality of everyday practice. The importance of pressure injury risk assessment to the patient's overall care became more apparent with each patient and group of patients that I was assigned to as a student. Various nursing courses thereafter always emphasized the importance and accuracy of pressure staging in the clinical setting. Lectures and quizzes were devoted to pressure injury staging, and descriptions and terms such as slough and granulation.

As a new nurse transitioning into practice, I had a great orientation. My preceptor guided me through the first crucial months of my transition to practice. Lectures by a certified wound, ostomy, and continence nurse helped to fill my knowledge gaps and ground my everyday practice as a novice nurse. The ability to shadow the wound ostomy continence nurse and see knowledge translation firsthand was valuable. My orientation placed a heavy emphasis on documentation because it would now play a more prevalent role in my assessments.

Pressure injury prevention and treatment is just one part of what I do every day as a generalist nurse on a medical-surgical unit working the night shift. One of the most exciting parts of my role is that I am now part of the "dermal defense team' at my hospital. This is an open team that gathers prevalence and incidence data through quarterly rounds. We hold monthly meetings on wound management, new research findings, and various other topics. We take this information back to our units and present it at our unit-based council meetings. The team is open and inviting to new members, even encouraging each "new to practice" group of nurses to participate in prevalence and incidence day! We have recently acquired bright yellow t-shirts that identify the dermal defense team. They have the Temple University Hospital mnemonic for pressure ulcer prevention and treatment care emblazoned on them. It says:

T urn and reposition
E valuate nutrition
M anage moisture
P ressure relief
L ift heels
E ducate

From my lived experience, I can now assess how important it is to bridge the gap from evidence to practice. I will keep up to date on the latest research and practice innovations to become a lifelong pressure injury learner and educator.

CONCLUSIONS

Pressure injury knowledge tools[44,45] reinforce the need to improve nursing students' knowledge.[46] Successful nursing education needs to incorporate evidence-based practice: scientific evidence, expert knowledge, and patient preference as outlined by David Sackett.[47] This is facilitated by an interactive longitudinal curriculum that follows the educational process. This educational base must be supplemented by clinical experience at the bedside, where pressure injury prevention and management can be linked to quality indicators and monitoring for best practice. Linking this formative and continuing education to outcomes both for patients (improved pressure injury healing, fewer injuries) and healthcare systems (lower pressure injury prevalence-incidence rates and professional errors) are all potential important benchmarks to measure education. Again, although pressure injuries are historically linked to nursing, pressure injury education and care need to be interprofessional. This journal's founding editor, Dr Roberta Abruzzese, made that point very clear in her first 1988 journal editorial that pressure ulcers needed the attention of the entire interprofessional team.[48]

It has been more than 10 years since the Institute of Medicine[49] released its landmark paper on education and quality, yet instituting interprofessional education in most basic prelicensure nursing and other health science programs is still a challenge. The ideal education of the future also needs to develop students' professionalism, health advocacy skills, and ability to work in interprofessional teams and expert groups for optimal pressure injury prevention and management (diagnosis and treatment). The Porter model of healthcare[50] can help clinicians reach this goal: Integrated, coordinated interprofessional care should give value for the healthcare dollar. There needs to be a greater priority devoted to integrating nursing curriculums with interprofessional education to enhance pressure injury prevention and management. Are you up to the modern challenge of creating the best possible education to improve pressure injury and all wound care outcomes?

PRACTICE PEARLS

- Nurses have a low level of pressure injury knowledge that needs enhancement to improve patient care outcomes.
- Basic nursing education programs should include the content as specified in the NPUAP competency-based curriculum for major pressure ulcer prevention competencies.
- Continuing professional development for pressure injury prevention and management should include evidence-based educational methods and strategies.
- Nursing professional checklists for pressure injury competency and performance evaluations need to be implemented for all levels (novice to expert).
- Nurses and all healthcare professionals need to be lifelong learners to enhance pressure injury prevention and management.
- Pressure injury care is optimized with interprofessional education and communication.

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