

C L I N I C A L M A N A G E M E N T

extra

2014 Survey Results: Wound Care and Prevention



ANCC

2.8 Contact Hours

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This continuing educational activity will expire for physicians on August 31, 2015.

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PURPOSE:

To provide information about the results of a survey on wound care practices.

TARGET AUDIENCE:

This continuing education activity is intended for physicians and nurses with an interest in skin and wound care.

OBJECTIVES:

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

- 1. Analyze the survey results related to established wound care standards.**
- 2. Identify evidence-based wound care interventions.**

ABSTRACT

The results of the 2012 Wound Care Survey are presented. A total of 647 nurses participated in this follow-up to the 2005 survey conducted by the authors.

KEYWORDS: wound care, wound prevention

ADV SKIN WOUND CARE 2014;27:371–80; quiz 381–2.

More than 8 years ago, the authors conducted a wound care survey and reported the results in *Nursing* 2005,¹ and also shared the article in the June 2005 issue of *Advances in Skin & Wound Care*. Because wound care evidence and practice has continued to change, the authors invited nurses to participate in an updated version of that survey to gather data on current nursing practice in skin and wound care and wound prevention. The authors thank the 647 nursing colleagues who took the time to answer this confidential and anonymous survey. This is a similar response rate to the previous 2005 wound survey.¹ (See Table 1 for an overview of nurses responding to this survey.) The authors also appreciate the supplementary comments many nurses contributed.

It was an encouraging sign that more nurses responded correctly about making sure there was an adequate blood supply before initiating moist wound healing for healable wounds. Being able to correctly categorize a wound as healable, maintenance, or nonhealable is an important concept that the authors are delighted is understood by more nurses.² The findings suggest that nurses want more education about skin and wound care in both their basic education and in their ongoing education once they are in practice.

Given the new knowledge regarding skin tear practices and the difficulties in differentiating between the stages of full-thickness pressure ulcers (PrUs), the authors believe that these findings can provide some support for the importance of helping nurses understand correct wound etiology and classification.

The following pages include the results from both the 2005 and the 2012 surveys so the data can be compared. Responses to each survey question, including evidence-based rationales for the correct or preferred answers, which are highlighted in red, are discussed. No data from 2005 are provided for some questions because they were not asked in that survey. Percentages do not always add up to 100% due to rounding.

1. Moist wound therapy is the gold standard for management of most chronic wounds but not for wounds without adequate vascular supply.

	2012	2005
True	68%	74%
False	32%	26%

Table 1.

RESPONDENT PROFILE

Here's a snapshot of the nurses who responded to this survey.

Age

- 51 to 65: 47% (n = 299)
- 41 to 50: 22% (n = 142)
- 31 to 40: 15% (n = 94)
- 21 to 30: 12% (n = 78)
- over 65: 5% (n = 34)

Top 3 groups in years of nursing experience

- over 20 years: 46% (n = 300)
- 16 to 20 years: 11% (n = 71)
- 6 to 10 years: 11% (n = 68)

Educational level

Like survey respondents in 2005, most respondents to the current survey had either an associate degree (AD) or a bachelor's of science in nursing (BSN) degree. In the current survey, exactly the same percentage of respondents (27%) reported having either an AD (n = 174) or a BSN (n = 174). The remaining respondents broke down as follows:

- LPN/LVN: 14% (n = 89)
- RN diploma: 11% (n = 70)
- MSN: 9% (n = 61)
- MS, nonnursing: 2% (n = 15)
- doctoral degree: 0.6% (n = 4)
- student: 0.6% (n = 4).

Current position

Most respondents (55%) were clinical staff nurses (n = 354). Advanced practice nurses were the smallest group (6%, n = 37).

Clinical area and practice setting

A little more than half of respondents identified their clinical area as either medical-surgical (28%, n = 180) or geriatrics (25%, n = 159). Most respondents worked in a hospital (43%, n = 276) with the next-highest groups being from long-term care (21%, n = 137) and home healthcare/community health (18%, n = 114).

Certification

Wound-care certification (such as CWOCA, CWCN, CWON, CWS, WCC) and membership in a professional wound care association

More respondents to this survey (14%) reported wound care certification, compared with only 10% in 2005. Several respondents commented that they wanted more information about how to obtain certification and about barriers to obtaining certification such as the cost. Some certifications are specific to nurses and others are interdisciplinary. Most respondents (88%) were not members of any professional wound care association.

As with the 2005 survey results, most nurses know that moist wound healing using appropriate dressings is indicated for wounds that are healable. The literature supports that healable wounds should be 30% smaller in surface size by week 4 of a treatment regimen.² The goal of care shifts for wounds that are not healable because the vascular supply is inadequate or the patient/family does not adhere to the treatment plan.² Wounds without adequate vascular supply/blood inflow should be kept dry, in contrast to the principle of moist wound healing. These wounds may need a dressing that provides protection and moisture reduction until vascular reconstruction is performed.^{2,3}

2. People with diabetic neuropathy who have a foot ulcer can have pain.

	2012
True	88%
False	12%

Most nurses answered this question correctly. Due to abnormal sensory input, patients with neuropathy often describe the pain as burning, stabbing, or shooting.⁴ Pain in a neuropathic foot needs to be explored as it could indicate that an underlying infection, such as osteomyelitis or Charcot foot, is developing.⁴

3. Length, width, and depth measurement should be a part of wound documentation.

	2012
True	99%
False	1%

Wound measurement is an important component of a wound assessment and also an indicator of the progression of or lack of wound healing. As noted above, the literature indicates that a healable wound should be 30% smaller in surface area in 4 weeks.² Recent changes in the Centers for Medicare and Medicaid Services (CMS) regulations for long-term care (MDS 3.0),⁵ long-term-care hospitals (LTCH) on the LTCH CARE data set,⁶ and in-home care on the Outcome and Assessment Information Set (OASIS-C)⁷ require documentation of PrU length, width, and depth.

4. The Braden Scale is used to assess a patient's potential to develop a vascular ulcer.

	2012	2005
True	38%	44%
False	62%	56%

A greater percentage of nurses responding to the current survey answered this question correctly than nurses responding to the

earlier survey. The authors do not know if this is because nurses have more knowledge, or if nurses were more careful in reading the word *vascular* as the type of ulcer. The Braden Scale is used only for PrU risk assessment, not vascular wounds. Another factor may be the increased emphasis on PrU risk assessment since 2008, when hospital-acquired PrUs were no longer reimbursed by CMS. Since the 1980s, the Braden Scale has been recognized as a research validated tool that has been used to assess a person's risk for developing a *pressure* ulcer. It cannot be used to assess risk for a vascular ulcer.

The Braden Scale contains 6 subscales (sensory/perception, moisture, activity, mobility, nutrition, and friction/shear), which are summed for a total score to identify the level of risk.⁸ However, clinicians also need to address any low subscale scores in the patient's plan of care. In its definition of a PrU, the National Pressure Ulcer Advisory Panel (NPUAP) states that "a number of contributing or confounding factors are also associated with PrUs; the significance of these factors is yet to be elucidated,"⁹ so all the risk factors for PrUs may not be captured on the Braden Scale.

Use the Braden Scale in conjunction with a comprehensive assessment of the patient that includes other risk factors, such as medications (especially steroids), comorbidities, diastolic BP below 60, and history of a PrU, that can put the patient at risk for a PrU.^{8,10} Some evidence suggests that skin temperature may be an indicator of PrU risk.¹¹⁻¹³

In addition, certain risk factors may be more important in some care settings than others. For example, decreased mobility and bowel incontinence were predictors of PrU risk in a study of home-care patients (n = 5375) based on OASIS-C data, with a finding of 1.3% incidence of PrUs.¹⁴

5. Classic signs of infection may not be present in patients with chronic wounds or in those who are immunosuppressed.

	2012	2005
True	92%	89%
False	8%	11%

Once again, most nurses who responded knew that the classic signs and symptoms of infection (erythema, heat, edema, pain, and purulent exudates) may not be present in patients with a chronic wound who is immunosuppressed.

6. Wet-to-dry gauze dressings are best to treat clean granulating chronic wounds.

	2012	2005
True	44%	38%
False	56%	63%

A slight majority of nurses responded correctly to this question in 2012, which is lower than the 63% who responded correctly in 2005. The authors are curious as to why this time, a smaller percentage of nurses got this right and wonder if the way the question was worded was a factor. Wet-to-dry dressings do not maintain a moist wound-healing environment when the dressing dries out. Generally avoid the use of wet-to-dry gauze dressing for clean granulating chronic wounds because removing the dry dressing from the wound pulls out newly deposited granulation tissue in the wound bed. Even though moist wound healing has been the treatment of choice for over 20 years, many healthcare providers still prescribe wet-to-dry gauze treatment.

A type of mechanical debridement, wet-to-dry dressings should be used only in wounds that have necrotic or slough-type of debris/tissue. The removal of wet-to-dry dressings is very painful, as the dried dressing adheres to the tissue and causes pain when it is removed.¹⁵ This is one reason that CMS recommended limiting the use of wet-to-dry dressings in its *Guidance to Surveyors for Long Term Care Facilities*.¹⁶

7. Skin tears are best treated using an adherent dressing.

	2012
True	30%
False	71%

Most nurses know that adherent dressings are not indicated to treat skin tears as they could damage healing skin during removal. A skin tear is an acute wound that can be of partial- or full-thickness insult.¹⁷ The dressing of choice is one that's non-adherent, protects the fragile skin, and can be left on for several days and removed without further damage.^{17,18}

Skin tears are often overlooked. The International Skin Tear Advisory Panel (ISTAP) has published an important review of the literature regarding skin tear prevention, assessment, and treatment recommendations^{17,18} along with a new validated simplified classification system.¹⁹ The panel has provided many helpful resources on the ISTAP website, www.skintears.org.

8. All patients at risk for PrUs should be turned and repositioned every 2 hours.

	2012
True	91%
False	9%

Most nurses got this wrong! It was not meant to be a difficult question; rather, the authors wanted to ask this question to highlight a change in practice. In the past, turning and repositioning patients every 2 hours was the standard, but this "one size fits all" time interval for repositioning is no longer considered appropriate by the NPUAP and some researchers. New research has provided support for repositioning recommenda-

tions from the NPUAP that take into account the type of mattress or support surface that a patient is on and how patient characteristics must be considered when developing an individualized repositioning time schedule.

Their recommendation that "repositioning frequency should be influenced by the support surface used" was at A level for strength of evidence.²⁰ (See Table 2.)

Furthermore, they state that "an individual should be repositioned with greater frequency on a non-pressure-redistributing mattress than on a viscoelastic foam mattress. The repositioning frequency should depend on the pressure-redistributing qualities of the support surface."²⁰ At C level of evidence is the NPUAP recommendation that when treating PrUs, "provide a support surface that is properly matched to the individual's needs for pressure redistribution, shear reduction, and microclimate control."²¹ For example, some patients with multiple comorbidities at very high risk may need to be turned and repositioned every hour, whereas others at lower risk may need to be turned only every 3 or 4 hours.

9. Stage I PrUs are easily identified in people with darkly pigmented skin.

	2012	2005
True	4%	7%
False	96%	93%

Once again, nurses correctly reported that identifying stage I PrUs in darkly pigmented persons is not easy. Relying on color as the only indicator for risk should not be current practice. The

Table 2.
RATING THE STRENGTH OF THE EVIDENCE³²

The NPUAP wound care recommendations are categorized as follows according to the strength of the evidence supporting them.	
A	Supported by direct scientific evidence from properly designed and implemented controlled trials on pressure ulcers in humans (or humans at risk for pressure ulcers), providing statistical results that consistently support the guideline statement (Level 1 studies required).
B	Supported by direct scientific evidence from properly designed and implemented clinical series on pressure ulcers in humans (or humans at risk for pressure ulcers), providing statistical results that consistently support the recommendation (Level 2, 3, 4, 5 studies).
C	Supported by indirect evidence (such as studies in normal human subjects, humans with other types of chronic wounds, animal models) and/or expert opinion.

NPUAP stage I definition alerts clinicians to look at other factors beyond color: “Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area. The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue.”⁹ Including skin palpation and temperature assessment for detecting a stage I PrU in this patient population may be indicated.

10. Topical enzymes are effective for removing necrotic tissue in chronic wounds.

	2012	2005
True	78%	89%
False	22%	11%

A lot has changed regarding enzymes since the authors first asked this question in 2005, especially since the FDA removed all papain urea products from the market in the United States. Some respondents told us that they do not use enzymes as a method of wound debridement in their care setting. This could account for the lack of knowledge regarding topical enzymes in clinical practice. Currently in the United States, only one type of enzyme has been available after the FDA pulled the other type off the market.

An enzymatic debrider is a safe and effective way to remove necrotic tissue, but it does take longer to chemically work than a scalpel or surgical debridement. The use of enzymatic debriding agents requires daily dressing changes.²²

Remember that an enzyme is a drug, so it must be prescribed by a healthcare provider licensed in your state or province to prescribe. As with any drug, healthcare practitioners must follow the manufacturer’s information for administering the drug and your facility’s medication administration policies and procedures.

11. My facility has a policy for how often a wound assessment should be completed and documented.

	2012	2005
Yes	90%	88%
No	5%	5%
I don’t know	5%	7%

Of course nurses know that wounds needed to be documented. A wound assessment is an important component of care; it is a picture of the wound’s current status and progress. The authors are glad that most respondents work in a facility that has a policy for the frequency of wound assessments.

A general rule for most facilities and practice sites is to assess on admission and then at least weekly thereafter. Most definitely reassess if a change or deterioration in the wound is noted. Assessments guide treatment decisions, so be sure to communicate

this information to other healthcare providers and nursing colleagues, especially those who are determining the patient’s plan of care, such as the wound care team.²³

12. A PrU with full-thickness tissue loss is staged/classified as: Stage I, Stage II, Stage III, or Stage IV.

	2012
Stage I	1%
Stage II	11%
Stage III or IV	88%

Most respondents know that the NPUAP classifies stage III and Stage IV PrUs as full-thickness tissue loss. The difference between a stage III and stage IV is that bone, muscle, and tendon are visible or palpable in a stage IV ulcer but not in a stage III ulcer. NPUAP classifies stage II as partial thickness.⁹

13. I can identify the 6 stages of PrUs in my patients.

	2012	2005 (4 stages)
Yes	55%	70%
No	35%	5%
Sometimes	10%	26%

The authors were intrigued by the drop in the percentage of correct responses in this survey compared with 2005, when PrUs were categorized into 4 stages. The comments provided gave the authors some insights as to how the wording of the question may have influenced the responses. They were not sure if this reflected confusion about the 6 stages of PrUs or about differentiating the stages. Some nurses mentioned that they were not aware that the NPUAP now has 6 stages or categories of PrUs. Four stages have numbers (I–IV) and the others word labels (unstageable/unclassified depth unknown, and suspected deep tissue injury depth unknown).⁹

14. Pressure redistribution products (such as specialty beds, mattresses, or chair cushions) are used in my facility to prevent PrUs.

	2012	2005
Yes	94%	88%
No	4%	11%
I don’t know	2%	2%

Because the primary force behind PrU occurrence is pressure, using products to redistribute pressure should be part of the PrU prevention plan for patients at risk for PrUs.²⁰ A good rule of practice is to know what your patient is lying or sitting on daily.

15. Wound culture specimens are obtained in my facility by the following methods. (Check all that apply.)

	2012	2005
Swab	98%	98%
Fluid aspiration	26%	38%
Tissue biopsy	30%	35%

Wound culture practice has remained constant since 2005, but these results demonstrate the wide variation in how cultures are performed. Tissue biopsy and fluid aspiration cultures are not typically performed by nurses except for advanced practice nurses who are licensed to do so. Infection can be diagnosed with a bacterial swab that helps identify resistant organisms or serves as a guide to antimicrobial therapy. Swab cultures can be effective if the wound bed is debrided and cleansed and the culture specimen taken from healthy tissue.²⁴ The authors do not know how many respondents do not perform wound cultures, and it was a good suggestion to include that question in the next survey.

16. Nurses in my facility wear sterile gloves for dressing changes on chronic wounds.

	2012	2005
Yes	25%	35%
No	75%	65%

Patient risk factors and wound type can influence the choice of sterile versus clean gloves, and the survey findings are consistent with common practice. Sterile gloves are generally used in combination with a sterile field and sterile instruments when a sterile dressing needs to be applied. Clean gloves are appropriate for the care and treatment of patients with chronic wounds, for patients not at risk for infection, and for routine dressing changes.²⁵

17. Compression wrap/bandaging multilayer system/dressing is the gold standard for treating venous ulcers.

	2012
Yes	78%
No	22%

18. I know how to apply a compression wrap/bandaging multilayer system/dressing.

	2012	2005
Yes	68%	71%
No	32%	29%

Because questions 17 and 18 are related, the authors have included their discussion about the findings together. In 2012, a slightly

lower percentage of nurses indicated that they knew how to apply compression wraps/bandages than in the previous survey. In order to clarify if this reflects a lack of ability in performing this skill or a lack of awareness of the role of compression in the care of patients with a venous leg ulcer, the question about compression being the gold standard was included. It was encouraging that most nurses got this correct. Results of the Cochrane library review underscore the importance of compression in healing venous leg ulcers as review of 8 randomized controlled trials (RCTs) revealed better patient-healing outcomes in patients where compression was used compared with those without compression.²⁶ The type of compression used might also make a difference. One RCT reported better healing with 2-component elastic system versus no-elastic component, another RCT revealed better healing with 3-component elastic systems versus no-elastic component while another found no difference, and 5 RCTs reported faster healing with 4-layer systems compared with short stretch bandages.²⁶

Now that the reasons why compression is a gold standard in treating venous ulcers has been reviewed, the authors will examine how nurses felt about their competence in applying compression bandaging systems. Results here varied by setting and nursing role. Because many patients with venous leg ulcers are treated in the home healthcare/community health or wound clinic setting, it was no surprise that most nurses from these settings answered *yes* (91%, n = 104 and 97%, n = 29, respectively). Most nurses working in both these settings also said they knew how to apply compression wraps/bandaging systems: 81%, (n = 92) in home healthcare/community setting and 80% (n = 23) in the wound-care clinic setting. Although fewer nurses working in long-term-care settings knew that compression wraps/bandaging is the gold standard for care (69%, n = 95), more of them (76%, n = 104) responded that they knew how to apply them. More hospital nurses (73%, n = 201) knew that compression wrap/bandaging systems are the gold standard for treating venous ulcers but fewer reported that they knew *how* to apply them (54%, n = 149). The authors believe that this is an opportunity for on-going education for nurses, including assessment of their performance competency.

19. The following are routinely used to clean chronic wounds in my facility. (Check all that apply.)

The authors were pleased that a great majority of respondents use saline or a wound cleanser for their practice. Wound cleansing

	2012
0.9% sodium chloride (normal saline)	88%
Povidone-iodine	11%
Commercial wound cleanser	50%
Other (please specify)	8%

is a process for removing debris and contaminants from the wound bed. Often cleansing with normal saline is not aggressive enough; a wound cleanser is then the product of choice. Toxic antiseptic agents such as povidone-iodine are still contraindicated in most wound care practices for clean granulating wounds.²⁴ Education of all healthcare providers is still needed.

20. Nurses are licensed in my state or province to do minor surgical debridement.

In both survey years, a substantial minority of nurses did not know whether nurses in their jurisdiction were permitted to

	2012	2005
Yes	12%	18%
No	58%	53%
I don't know	30%	29%

perform minor surgical debridement. The authors hope that this question has inspired them to find out.

Surgical or sharp debridement is the removal of necrotic tissue from a wound bed. Only licensed healthcare professionals in a state or province may perform this procedure. If unsure, be sure to review the nurse practice act in the practicing jurisdiction. When in doubt, do not debride any tissue from a wound bed.²² Note: Questions 21 and 22 were of insignificant data.

23. Skin assessment is part of my daily/shift nursing assessment for all my patients.

It is great to have the evidence that most nurses are including skin assessment as part of their practice. Hospital nurses

	2012	2005
Yes	87%	89%
No	7%	6%
Sometimes	6%	5%

(n = 262) and hospice nurses (n = 98) reported the highest percentages (95% for both). Home health was next with 90% (n = 102), followed by long-term care at 72% (n = 98).

A skin assessment involves inspection and palpation of the skin over the patient's entire body. It is more than determining whether skin is dry and intact. Also look for abnormal moles, lesions, erythema, or ecchymoses, and document your findings.²⁷

24. A computerized wound assessment tool is used in my facility.

	2012	2005
Yes	53%	34%
No	47%	66%

Because of the push for electronic health records, the authors were not surprised by the increase in the percentage of respondents who now use computerized wound assessment tools. Respondents working in home healthcare/community health (68%, n = 77) and hospitals (61%, n = 170) were most likely to be using computerized tools; those working in long-term care (34%, n = 46) and hospice (33%, n = 7) were least likely to be using them. Computerized wound assessment tools are the wave of the future as regulatory compliance becomes a reality.

25. Do you know your facility's PrU incidence rate?

	2012
Yes	36%
No	64%

26. Do you know your unit's PrU incidence rate?

	2012
Yes	38%
No	62%

Because questions 26 and 27 are related, the authors will discuss the results for these 2 questions together. They were very interested in knowing the nurses' responses to this question, given all the CMS regulations regarding PrUs that have been established since the last survey in 2005. For example, since 2008, hospitals are no longer reimbursed at the higher rate for expenses related to PrUs that occur during a hospitalization.²⁸ In addition, CMS patient/resident assessment forms have been revised as to information regarding PrUs.^{5-7,29} Given that PrUs are seen by the National Database of Nursing Quality Indicators as a nurse-sensitive indicator,³⁰ and that some nurses participate in their facilities' PrU prevalence and incidence survey data collection, the authors wondered how the results of those efforts are disseminated throughout healthcare facilities. So, they looked at responses in more detail by type of facility.

The percentage of nurses working in long-term care and hospitals responding *yes* to knowing their facility rate was 44% and 41%, respectively, higher than nurses in home health/community health (20%) or hospice (29%). When it came to knowing a specific unit's PrU incidence rate, the same overall pattern was apparent, with nurses from long-term care and hospitals responding *yes* to knowing their unit's rate at 42% and 46%, respectively. The percentage of nurses who knew their own unit's PrU rate was less than for facility rate among nurses working in home health/community health (18%) and hospice (14%).

Sorting the data to better understand the implications, the authors looked at nurses' responses by current position. It was no surprise that for both facility and unit incidence rates, the responses were higher for charge nurse/assistant nurse manager (33% for facility, 37% for unit), manager/supervisor (51%, 52%), and advanced practice nurses (70%, 60%) than for clinical nurses (25%, 30%). The authors see this as an opportunity for management to be creative in educating and communicating to all staff the PrU incidence rate, not only in their facility but also on nursing units.

27. I received sufficient education on chronic wounds in my basic nursing-education program.

	2012	2005
Yes	31.5%	30%
No	68.5%	70%

Once again, the number of years of nursing experience may have influenced responses. The more experience a nurse had in nursing, the *less* likely he or she was to respond *yes* to this question:

- 2 to 3 years, 47%
- 4 to 5 years, 42%
- 6 to 10 years, 43%
- 16 to 20 years, 32%
- over 20 years, 23%.

As the authors suggested in 2005, either nursing education has improved in covering wound-care content, or "our collective memory about our educational experience has dimmed, or you do not know what you do not know until you have had some experience."¹ Once again, masters of science-prepared nurses had the highest percentage (79%) of *no* responses.

Nurses offered several comments about their perceived lack of sufficient education on chronic wound care in basic nursing-education programs. As far as work setting, more nurses in home healthcare/community care (43%) answered *yes*, compared with those in long-term care (33%), hospitals (29%), or hospice (29%). More clinical nurses (39%) and charge nurse/assistant nurse managers (36%) answered *yes* compared with manager/supervisors (22%) or advanced practice nurses (5%). Once again, the authors see this as an opportunity to enlighten educators about the importance of including this content in the nursing curriculum.

Nurses also had a lot to say about the importance of continuing education, especially for all shifts and for other disciplines besides nurses. Fortunately, many national and regional conferences and symposiums on wound care are available for nurses to help them acquire the knowledge and most current evidence in this specialty area. (See Table 3.)

Table 3.

WHAT NURSES HAD TO SAY ABOUT WOUND CARE

Many survey respondents contributed written comments with their survey responses. A persistent theme was the need for more education for practitioners in all settings and at all levels. Here is a sampling.

- Wound care isn't really covered in nursing school.
- Students need more education; nurses need reviews and updates.
- We need more wound care workshops in hospital for all shifts.
- I work part time in a small rural hospital, where we don't have the luxury of a wound care team or CWOCN. Many times the physicians are not up-to-date on current wound-care practices either and look to nurses for recommendations. Good time for me to recommend an inservice on wound care to our nurse manager after the results of this survey are published!
- One of our greatest challenges is the education of surgeons and primary care physicians in our area to stop using wet-to-dry dressings, stop using Dakin solution, and stop using hydrogen peroxide!
- A lot has changed in wound care since the 1970s and I've learned so much. I can proudly say local docs have called me for my opinion on wounds. WOCN are rare in our rural setting.
- I started a lunch and learn program for nurses on wound and ostomy care at the last two facilities where I worked. It was received and attended very well.
- Previously I was a case manager in home health and I found that although home health nurses exhibited confidence in their ability to perform wound care, in reality they didn't always know the best way to treat a wound. Neither my LPN program nor my RN program provided much education on wound care. Most of what I know came from in-services postschool, journal articles, and the Internet.
- The home health agencies I've worked for don't include enough education on wound care in orienting new home health nurses and foolishly try to limit newer wound care applications and encourage the use of simple gauze dressings because they feel this is less costly.
- I'd like to see more educational opportunities open up to LPNs who are in supervisory roles within the long-term-care industry and are the main wound care providers in the facilities where they're employed—especially in rural areas.
- I'm a skin care champion in my hospital. We do weekly surveys of all patients in my unit and quarterly hospital-wide surveys. We use cameras for documentation rather than depending on the wide range of descriptions.
- In hospice, our goal is not to heal the wounds. Our goal is to treat/prevent wound-related pain, prevent new ulcers (if possible), and maintain current wounds. I wish there was more education for nurses related to fungating cancer wounds, as we often see them in hospice.

28. I'm comfortable in making recommendations to practitioners on appropriate wound dressings for my patients.

	2012	2005
All the time	15%	19%
Most of the time	36%	33%
Sometimes	32%	41%
Never	6%	8%
Our wound team/nurse makes the decisions	12%	Not an option offered in 2005

As in 2005, with age and experience more nurses expressed confidence all or most of the time. Among age groups, the highest percentage answering *all the time* or *most of the time* were nurses over age 65 (24% and 47%, respectively). Nurses ages 51 to 65 were next, with 17% responding *all the time* and 41% *most of the time*. In comparison, in the youngest age group, those ages 21 to 30, only 6% responded *all the time* and 28% responded *most of the time*. The pattern of percentages was the same when data were analyzed by years of experience in nursing.

Once again, the authors are not sure if these responses reflect experience, age, or, as they speculated in 2005, "interdisciplinary communication issues rather than lack of confidence in wound care experience."¹

29. Does your practice setting have a designated wound care team?

	2012
Yes	65%
No	32%
I don't know	3%

34. Are you a wound care team nurse?

	2012
Yes	24%
No	76%

Because questions 33 and 34 are interrelated, the authors will discuss the findings together. They added these questions to the current survey to see how many respondents had access to a wound care team or were working as a wound care team nurse. Most PrU clinical guidelines and algorithms agree that PrU prevention and treatment is best managed when feasible by an interdisciplinary wound care team,³¹ so it is wonderful that almost two-thirds of respondents said their facility had a designated wound care team and nearly a quarter were on the team!

The responses varied by care setting, with long-term care (77%) and hospital (75%) having the most yes responses followed by hospice (38%) and home healthcare/community health (32%) with the least.

DISCUSSION

Skin and wound care is a nurse-sensitive quality measure, so the authors are grateful that so many nurses responded to their updated survey. Because this was a nonrandomized self-selected small sample size of nurses who read *Nursing 2012*, the authors acknowledge that there are limitations to their findings, which cannot be generalized to all nurses. It does, however, provide some insights into how nurses perceive their knowledge and skills in this specialty area. Although more research is needed, survey results suggest that nurses want more education regarding this specialty in both their basic nursing-education and continuing-education programs.

The ability to accurately stage PrUs is important not only from a CMS regulatory perspective, but also from a clinical one to develop an appropriate plan of care. Survey respondents pointed out that full-thickness PrUs might present some difficulties in assessment. Also given the growing number of older adult patients and the potential for more patients with venous disease and ulceration, knowing the importance of compression therapy and how to apply compression wraps/dressings will be an essential nursing skill. The authors believe these survey results demonstrate the need for more education about wound care for both nursing students and clinical nurses.

REFERENCES

1. Ayello EA, Baranoski S, Salati DS. Nursing 2005 wound care survey report. *Nursing* 2005;35(6):36-45.
2. Sibbald RG, Goodman L, Woo KY, et al. Special considerations in wound bed preparation 2011: an update. *Adv Skin Wound Care* 2011;24:415-36.
3. Sieggreen MY, Kline RA, Sibbald RG, Weir GR. Arterial ulcers. In: Baranoski S, Ayello EA, eds. *Wound Care Essentials: Practice Principles*. 3rd ed. Ambler, PA: Lippincott Williams & Wilkins; 2012:398-419.
4. Dallam LE, Barkauskas C, Ayello EA, Baranoski S, Sibbald RG. Pain management and wounds. In: Baranoski S, Ayello EA, eds. *Wound Care Essentials: Practice Principles*. 3rd ed. Ambler, PA: Lippincott Williams & Wilkins; 2012:295-321.
5. Centers for Medicare & Medicaid Services. MDS 3.0 RAI manual. <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/MDS30RAIManual.html>. Last accessed May 22, 2014.
6. Centers for Medicare & Medicaid Services. LTCH quality reporting. <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/LTCH-Quality-Reporting>. Last accessed May 22, 2014.
7. Centers for Medicare & Medicaid Services. OASIS-C user manuals. <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/HHQIOASISUserManual.html>. Last accessed May 22, 2014.
8. Prevention Plus. The Braden Scale. <http://www.bradenscale.com>. Last accessed May 22, 2014.
9. National Pressure Ulcer Advisory Panel. NPUAP pressure ulcer staging/categories. <http://www.npuap.org/resources/educational-and-clinical-resources/npuap-pressure-ulcer-stages/categories>. Last accessed May 22, 2014.
10. Lyder CH, Wang Y, Metersky M, et al. Hospital-acquired pressure ulcers: results from the National Medicare Patient Safety Monitoring System study. *J Am Geriatr Soc* 2012;60:1603-8.

11. Sprigle S, Linden M, McKenna D, Davis K, Riordan B. Clinical skin temperature measurement to predict incipient pressure ulcers. *Adv Skin Wound Care* 2001;14:133-7.
12. Rapp MP, Bergstrom N, Padhye NS. Contribution of skin temperature regularity to the risk of developing pressure ulcers in nursing facility residents. *Adv Skin Wound Care* 2009;22:506-13.
13. Wong VK, Stotts NA, Hopf HW, Dowling GA, Froelicher ES. Changes in heel skin temperature under pressure in hip surgery patients. *Adv Skin Wound Care* 2011;24:562-70.
14. Bergquist-Beringer S, Gajewski BJ. Outcome and assessment information set data that predict pressure ulcer development in older adult home health patients. *Adv Skin Wound Care* 2011;24:404-14.
15. Baranoski S, Ayello EA, McIntosh A, Montoya L, Scarborough P. Wound treatment options. In: Baranoski S, Ayello EA, eds. *Wound Care Essentials: Practice Principles*. 3rd ed. Ambler, PA: Lippincott Williams & Wilkins; 2012:181-239.
16. CMS Manual System. Guidance to Surveyors for Long Term Care Facilities. 2004. http://www.hsag.com/App_Resources/Documents/PrU_LS1_F_314.pdf. Last accessed May 22, 2014.
17. LeBlanc K, Baranoski S; Skin Tear Consensus Panel Members. Skin tears: state of the science: consensus statements for the prevention, prediction, assessment, and treatment of skin tears. *Adv Skin Wound Care* 2011;24(suppl 9):2-15.
18. LeBlanc K, Baranoski S, Christensen D, et al. International Skin Tear Advisory Panel: a tool kit to aid in the prevention, assessment, and treatment of skin tears using a simplified classification system. *Adv Skin Wound Care* 2013;26:459-76.
19. LeBlanc K, Baranoski S, Holloway S, Langemo D. Validation of a new classification system for skin tears. *Adv Skin Wound Care* 2013;26:263-5.
20. European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Washington, DC: National Pressure Ulcer Advisory Panel; 2009:17. http://www.npuap.org/wp-content/uploads/2012/03/Final_Quick_Prevention_for_web_2010.pdf. Last accessed May 22, 2014.
21. European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Washington, DC: National Pressure Ulcer Advisory Panel; 2009:14. http://www.npuap.org/wp-content/uploads/2012/03/Final_Quick_Treatment_for_web_2010.pdf. Last accessed May 22, 2014.
22. Ayello EA, Baranoski S, Sibbald RG, Cuddigan JE. Wound debridement. In: Baranoski S, Ayello EA, eds. *Wound Care Essentials: Practice Principles*. 3rd ed. Springhouse, PA: Lippincott Williams & Wilkins; 2012:157-79.
23. Baranoski S, Ayello EA, Langemo DK. Wound assessment. In: Baranoski S, Ayello EA, eds. *Wound Care Essentials: Practice Principles*. 3rd ed. Springhouse, PA: Lippincott Williams & Wilkins; 2012:101-25.
24. Gardner SE, Frantz SE. Wound bioburden and infection. In: Baranoski S, Ayello EA, eds. *Wound Care Essentials: Practice Principles*. 3rd ed. Springhouse, PA: Lippincott Williams & Wilkins; 2012:126-56.
25. Wound, Ostomy and Continence Nurses Society (WOCN) Wound Committee; Association for Professionals in Infection Control and Epidemiology, Inc. (APIC) 2000 Guidelines Committee. Clean vs. sterile dressing techniques for management of chronic wounds: a fact sheet. *J Wound Ostomy Continence Nurs* 2012;39(suppl 2):S30-4.
26. O'Meara S, Cullum N, Nelson EA, Dumville JC. Compression for venous leg ulcers. *Cochrane Database Syst Rev* 2012. <http://www.ncbi.nlm.nih.gov/pubmed/23152202>. Last accessed May 22, 2014.
27. Baranoski S, Ayello EA, Tomic-Canic M, Levine JM. Skin: an essential organ. In: Baranoski S, Ayello EA, eds. *Wound Care Essentials: Practice Principles*. 3rd ed. Springhouse, PA: Lippincott Williams & Wilkins; 2012:57-82.
28. Centers for Medicare and Medicaid Services. Hospital-acquired conditions (present on admission indicator). <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/index.html?redirect=/hospitalacqcond>. Last accessed May 22, 2014.
29. Centers for Medicare and Medicaid Services. IRF patient assessment instrument. <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/InpatientRehabFacPPS/IRFPAL.html>.
30. NDNQI. <http://www.nursingquality.org>. Last accessed May 22, 2014.
31. Bolton L, Girolami S, Hurlow J. The AAWC pressure ulcer guidelines. Wound care teams have a new set of tools to improve outcomes. *Am J Nurs* 2013;113(9):58-63.
32. European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Washington, DC: National Pressure Ulcer Advisory Panel; 2009:6. http://www.npuap.org/wp-content/uploads/2012/03/Final_Quick_Prevention_for_web_2010.pdf.

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