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Skin and wound care survey: 2019 results

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Abstract: This article presents the 2019 Skin and Wound Survey results, which could assist in identifying gaps in nurses' skin and wound care knowledge and in developing nursing curricula and continuing professional development. The 2019 survey was conducted before the COVID-19 pandemic, and the results are compared with those from surveys conducted in 2004 and 2012. Author commentaries and additional input from the survey participants are also provided.

Keywords: incontinence-associated dermatitis, ostomy, peripheral neuropathy, pressure injuries, skin care, wound care

Skin and wound care has long been part of nursing practice. Since its inception, *Nursing* journal has conducted three skin and wound care surveys: in 2004, 2012, and 2019. This article presents the self-reported data from nurses who participated in the three surveys as a snapshot of nurses' knowledge about skin and wound care. Data from the 2019 survey are compared with those from the 2004 and 2012 surveys.^{1,2} The results are used as a needs as-

essment of further educational opportunities. The survey results could be a valuable tool in staff meetings or an education day to assess nurses' knowledge of skin and wound care evidence and trends and related skills.

Extant literature

Literature on skin health has grown vastly since this journal's last wound care survey in 2012, the results of which were published in

Nursing2014.^{1,2} For example, the National Pressure Injury Advisory Panel (NPIAP), formerly the National Pressure Ulcer Advisory Panel (NPUAP), has revised the classification system and staging so that the term “pressure injury” rather than “pressure ulcer” is used.³ Since in dermatology, the term ulcer indicates the loss of epidermis with a dermal base or deep skin base, the term ulcer does not apply to all pressure injuries as not all pressure injuries have open skin into the dermis.

The NPIAP, European Pressure Ulcer Advisory Panel (EPUAP), and Pan Pacific Pressure Injury Alliance (PPPIA) published International Pressure Injury guidelines in 2014 and then again in 2019.⁴ In 2018, The Wound Ostomy & Continence Society (WOCN®) revised their clinical practice guidelines for managing adults with a fecal or urinary ostomy.⁵ The World Council of Enterostomal Therapists (WCET®) also published International Ostomy Guidelines in 2010 and then again in 2020.⁶

The International Skin Tear Advisory Panel (ISTAP®) has developed a new classification system on the care and management of skin tears along with protocols including risk assessment, care modalities, and a simplified classification system.⁷

2019 survey methodology

In the spring of 2019, readers of *Nursing2019* were invited to complete the survey online or photocopy the published survey and either fax or mail the completed survey to the journal business office in Philadelphia, Pa.

The results of the 2019 Skin and Wound Care Survey are reported by rounding the data to the nearest whole percentage and number where appropriate. Not all participants answered each question. Data from the previous survey(s) are provided for comparison where available. Most of the 359 nurses that responded to the

anonymous survey were from North America, with the majority being from the US (see *Demographics*). This is a lower number of respondents compared with the 647 nursing colleagues who completed the survey in 2012.²

Survey results

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

	2019	2012	2005
True	70%	68%	74%
False	30%	32%	26%

Moist wound therapy is considered the gold standard in managing healable chronic wounds.⁸ However, results from these three Skin & Wound Care surveys suggest that 30% of nurses are routinely unaware of this or consider it false.

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

	2019	2012
True	86%	88%
False	14%	12%

Patients with peripheral neuropathy do experience pain.⁹ It is often described as a stabbing, sharp, or throbbing pain. This type of pain is common in persons with diabetes mellitus.

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

	2019	2012
True	100%	99%
False	0%	1%

A wound assessment should include length, width, and depth. When the wound has an open area with undermining or tunneling, include it in the depth measurement (for example,

the wound is 5 cm deep). These measurements should be documented in the patient’s health record.¹⁰

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

	2019	2012	2005
True	25%	38%	44%
False	75%	62%	56%

The Braden scale is an instrument to assess a patient’s risk for pressure injury development, not vascular ulcers.¹¹

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

	2019	2012	2005
True	90%	92%	89%
False	10%	8%	11%

Nurses are taught to assess for only classic signs of infection, such as erythema, induration, warmth, edema, foul odor, purulence, pain, and fever.¹² These classic signs appear in acute wound infection but may not be present or easily recognized in chronic wounds or in patients who are immunosuppressed.

With most chronic wound infections, subtle secondary signs of infection include delayed healing, change in color of the wound, friable (bleeds easily) granulation, absent or abnormal granulation, odor, wound breakdown (becomes wider, deeper), and pain.

Two mnemonics are helpful.^{12,13} For detecting superficial infection, NERDS: Non-healing wound, Exudate, Red and bleeding wound, Debris in the wound, and Smell from the wound. For deep infection, STONEES: Size is increasing; Temperature is increased;(Os) probes to bone or exposed bone; New areas of breakdown; Exudate; Erythema, edema; and Smell.

Demographics

N = 359

n (%)

Age	<ul style="list-style-type: none"> • 65+: 26 (7.32) • 51-65: 145 (40.85) • 41-50: 96 (27.04) • 31-40: 56 (15.77) • 21-30: 32 (9.01)
Years of nursing experience	<ul style="list-style-type: none"> • 20+: 170 (47.75) • 11-15: 47 (13.20) • 6-10: 47 (13.20) • 4-5: 19 (5.34) • 2-3: 16 (4.49) • 1, but less than 2 yrs: 5 (1.40) • Less than 1: 11 (3.09)
Education	<ul style="list-style-type: none"> • RN: 25 (7.00) • LPN/LVN: 19 (5.21) • MSN, MS: 73 (20.45) • BSN, BS: 154 (43.14) • AD: 59 (16.53) • Students: 2 (.56) • PhD or other doctoral degree: 17 (4.76) • Other: 8 (2.24)
Current position	<ul style="list-style-type: none"> • Clinical nurse: 141 (39.51) • Wound care team nurse: 56 (15.73) • Staff educator or case manager: 33 (9.27) • Manager or supervisor: 23 (6.46) • APN: 15 (4.21) • Other: 76 (21.35)
Primary clinical practice	<ul style="list-style-type: none"> • Medical/Surgical: 108 (30.42) • Geriatrics: 36 (10.14) • Outpatient wound care: 36 (10.14) • ICU: 27 (7.61) • Outpatient, other: 21 (5.92) • ER: 12 (3.38) • Rehabilitation: 12 (3.38) • OR, Perioperative: 7 (1.97) • Pediatrics: 6 (1.69) • Other: 90 (25.35)
Primary work setting	<ul style="list-style-type: none"> • Hospital: 212 (59.72) • Long-term care: 26 (7.32) • Wound clinic: 26 (7.20) • Other ambulatory outpatient setting: 22 (6.20) • Home/Community health: 17 (4.79) • Healthcare provider office: 8 (2.25) • Subacute care: 6 (1.69) • Hospice: 5 (1.41) • Prison: 1 (0.28) • Other: 32 (9.01)
Wound certification	<ul style="list-style-type: none"> • Not wound certified: 281 (79.60) • Yes, certified: 72 (20.40)

(continued on next page)

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

	2019	2012	2005
True	34%	44%	38%
False	66%	56%	62%

Wet-to-dry gauze dressings are not the best treatment for clean granulating wounds. Wet-to-dry dressings are a method of mechanical debridement; when the dried dressing is removed from the wound, tissue is also removed from the wound bed.¹⁴ Healable wounds need moisture to heal.

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

	2019	2012
True	22%	30%
False	78%	70%

The best treatment for skin tears is a nonadherent dressing that will not disturb the skin flap on removal and supports healing.⁷

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

	2019	2012
True	90%	91%
False	10%	9%

This statement has been considered true in the past.¹⁵ However, newer research supports that turning and repositioning should be based on the individual patient's needs and may be extended for longer periods if the patient is on a viscoelastic mattress.^{4, 16-18} Other data suggest no difference in pressure injury incidence if long-term care residents on an appropriate pressure redistribution mattress were turned every 2, 3, or 4 hours.^{17,18}

Despite this evidence, nurses must follow their care setting's policy and

Demographics (Continued)

N = 359

n (%)

Professional wound association or organization membership

- **Do not belong to professional wound association:** 288 (81.36)
- **Yes:** 66 (18.64)

State/Country

- **Respondents from 47 US states:** Alabama, Alaska, Arkansas, Arizona, California, Connecticut, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Tennessee, Utah, Vermont, Virginia, Washington, Wisconsin, Wyoming
- **Respondents from 2 US Territories:** Guam, Puerto Rico
- **Respondents from 20 other countries:** Australia, Belgium, Brazil, Canada, India, Iran, Ireland, Italy, Kenya, Netherlands, Philippines, Portugal, Qatar, Saudi Arabia, Singapore, St. Kitts, South Africa, Taiwan, United Arab Emirates, United Kingdom

Not all participants answered each question.

procedure regarding the time or number of hours for turning and positioning. The hospital or care setting policy may not reflect the new research science. However, nurses can communicate new research about practice interventions to the appropriate committee or decision-makers in their workplace.

9. Stage 1 pressure injuries are easily identified in people with darkly pigmented skin.

	2019	2012	2005
True	2%	4%	7%
False	98%	96%	93%

Observing early skin changes on an area over a bony prominence in skin with darker pigmentation is challenging. The area may present as discolored or bluish as opposed to a pink or red color typically associated with erythematous tissue. Cutting-edge research on newer technology,

such as thermography or detecting subdermal moisture, may lead to more objective ways to detect pressure injuries in patients with greater pigmentation.^{13,19-22}

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

	2019	2012	2005
True	80%	78%	89%
False	20%	22%	11%

Topical enzymatic debridement agents are considered helpful treatments in debriding wounds with necrotic tissue (black eschar, slough), critical colonization or biofilm, and wound infections with adequate blood supply. These topical agents are drugs and therefore require a prescription. Their administration must be documented in the patient's medication administration record.^{23,24}

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

	2019	2012	2005
Yes	82%	90%	88%
No	6%	5%	5%
I don't know	12%	5%	7%

Facilities need to have policies that support timely wound documentation. An opportunity for raising awareness through staff education exists as 18% in 2019 either answered "no" or "I don't know," compared with 10% in 2012 and 12% in 2005.^{1,2}

12. A pressure injury with full-thickness tissue loss is staged/classified as what Stage?

	2019	2012
Stage 1	1%	1%
Stage 2	10%	11%
Stage 3 or 4	89%	88%

The correct answer is Stage 3 or 4 (see *Key descriptors of the six pressure injury stages*).

13. I can identify the six stages of pressure injuries in my patients.

	2019	2012	2005 (4 stages)
Yes	65%	55%	70%
No	25%	35%	5%
Some-times	10%	10%	25%

There are six stages of pressure injury, according to the NPIAP, though not all countries use this system.^{3,4} Four stages are numbered 1-4; the other two are named "unstageable" and "deep tissue injury."

According to the American Nurses Association, pressure injury staging is within the scope of practice for all

Key descriptors of the six pressure injury stages³

Stage 1: Skin injury from pressure (over a bony prominence) or from a medical device or another object where the skin is intact (epidermis is not open) and non-blanchable (skin color does not change when pressure is applied).

Stage 2: The skin epidermis is no longer intact and is open but not through the dermis. It may also present as a fluid-filled blister.

Stage 3: Skin is open, and injury is full thickness (deeper than the dermis, into the subcutaneous tissue, but not muscle, tendon, cartilage, or bone).

Stage 4: The skin is open, and injury is full thickness into deeper layers of tissue and maybe into muscle, tendon, cartilage, or bone.

Unstageable: The pressure injury wound bed is covered with enough eschar (dead tissue, usually hard black or yellow stingy dead tissue) that the clinician cannot see or evaluate the extent of tissues involved.

Deep-Tissue Injury: The pressure injury may be purple or maroon. Skin can be intact or open. Violous COVID-19 skin manifestations do not constitute a deep-tissue injury.

RNs.²⁵ Some nurses may not feel confident in their ability to stage pressure injuries as they may not have received practical education on identifying the different types of tissue in the wound bed. Some care settings limit which nurses should be doing the staging (see *Voices of the survey participants* published as Supplemental Digital Content at <http://links.lww.com/NSG/A2>).²⁶ More education on documenting the stages of pressure injury is needed in all facilities.

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

	2019	2012	2005
Yes	91%	94%	88%
No	5%	4%	10%
Some-times	4%	2%	2%

Most facilities have recognized the importance of using support surfaces as a preventive measure.²⁷

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

	2019	2012	2005
Swab	96.5%	98%	98%
Fluid aspiration	30.5%	26%	38%
Tissue biopsy	43%	30%	35%

A wound culture aims to identify bacterial resistance to any antibiotics that might be prescribed for a patient with a wound infection.¹² A wound swab culture is what most clinicians see performed in clinical practice. This only provides information regarding which organisms are on the wound surface. Different methods of obtaining a culture may not be available in all care settings.

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

	2019	2012	2005
Yes	27%	25%	35%
No	73%	75%	65%

Sterile gloves are not necessary for chronic wound care. However, clean gloves are appropriate.

17. Compression wrap/bandaging multilayer system/dressing is the

gold standard for treating venous ulcers.

	2019	2012
Yes	80%	78%
No	20%	22%

Compression is the gold standard for venous ulcers.²⁸ Because venous disease and peripheral artery disease (PAD) may commonly coexist, assessing the patient's ankle-brachial pressure index before using compression wraps is important. An assessment of audible vascular sounds with a handheld doppler or a vascular assessment of blood flow to the extremity prior to applying compression therapy is preferred. Compression is contraindicated in most patients with PAD.

18. I know how to apply a compression wrap/bandaging multi-layer system/dressing.

	2019	2012	2005
Yes	71%	68%	71%
No	29%	32%	29%

Wound nurses or physical therapists are often responsible for this intervention.²⁹

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

	2019	2012
0.9% sodium chloride	82%	88%
Povidone-iodine	13%	11%
Commercial wound cleanser	50%	50%
Other (please specify)	12%	8%

As in previous survey results, 0.9% sodium chloride remains the most common product used to clean chronic wounds; however, it does

not contain a surfactant that can help loosen debris in a wound. Povidone-iodine is a broad-spectrum antimicrobial used on acute and chronic wounds.

The use of commercial wound cleansers remained constant at 50%. Numerous commercial wound cleaners are available that effectively clean the wound bed. Other agents used included chlorhexidine scrub, tap water, sterile water, and soap and water.

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

	2019	2012	2005
Yes	22%	12%	18%
No	50%	58%	53%
I don't know	28%	30%	29%

All nurses need to know their individual State or Province's scope of practice regarding debridement.²³

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

	2019	2012	2005
Yes	90%	87%	89%
No	5%	7%	6%
Sometimes	5%	6%	5%

A skin assessment should always be part of the daily nursing assessment in acute care; in other care settings, such as home care, and long-term care, the specific workplace policy should be followed.³⁰ Nurses must examine the whole body from head to toe for any issues or concerns such as nonblanchable erythema of intact skin, document the results, and communicate abnormal assessment findings to the physician and other interprofessional team members.

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

	2019	2012	2005
Yes	55%	53%	34%
No	45%	47%	66%

The advantage of computerized wound assessment is that the institution has predetermined the wound descriptors, so they are consistent with the wound characteristics for every clinician reading the health record. It also saves time as clinicians can check the appropriate items that describe the wound rather than writing a narrative note. Furthermore, many electronic systems can track changes in the wound; for example, by creating a chart depicting wound size changes over time.

Standardized documentation that facilitates clinicians' quicker document time can enhance the completeness and consistency of communication of the wound appearance on any given assessment time.

Future surveys should explore why computerized documentation is unavailable in some practice settings.

23. Do you know your facility's pressure injury incidence rate?

	2019	2012
Yes	38%	38%
No	62%	62%

24. Do you know your unit's pressure injury incidence rate?

	2019	2012
Yes	43%	38%
No	57%	62%

Unfortunately, these numbers have not improved. Many nurses do not know the incidence rate of their facilities or units.

Pressure injury incidence rates from individual units and the whole facility must be shared from the top down.¹⁵ Discuss how units compare. What units have the highest and

lowest occurrence rates, and why? What are the plans to improve the facility's/unit's incidence rate? This is an important step in solving pressure injury occurrence rates.

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

	2019	2012	2005
Yes	32.5%	31.5%	30%
No	67.5%	68.5%	70%

Sadly, nurses maintain the perception that they did not receive adequate education about chronic wounds in their basic nursing education program.^{31,32}

26. I am comfortable in making recommendations to practitioners on appropriate wound dressings for my patients.

	2019	2012	2005
All the time	21%	15%	19%
Most of the time	31%	36%	33%
Sometimes	24%	32%	41%
Never	4%	6%	8%
Our wound team/nurse makes the decisions	19%	12%	Not an option offered in 2005
Other, explain	2%		

Wound dressing products are abundant, and education is needed to understand the indications and benefits of the individual dressing to the specific wound.¹⁴

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

	2019	2012
Yes	75%	65%
No	23%	32%
I don't know	2%	3%

28. A Type 2 skin tear is defined as partial flap loss that cannot be repositioned to cover the wound bed.

	2019
True	58%
False	14%
I don't know	28%

“True” is the correct answer.

A skin tear is a traumatic wound resulting from any mechanical force, including adhesive removal. The severity of skin tears under the Type 2 category may vary in depth (see *Types of skin tears*).^{7, 34}

29. Incontinence-associated dermatitis (IAD) typically presents as moist, erythematous skin irritation with inflammation and irregular borders.

	2019
True	90%
False	3%
I don't know	7%

IAD is a form of irritant contact dermatitis that develops from chronic exposure to urine and/or liquid stool.³³

30. Using skin products that keep the skin in the alkaline pH range can help prevent intertrigo dermatitis, a type of moisture-related skin damage.

	2019
True	80%
False	20%

Types of skin tears³⁴

Type 1: No skin loss. A linear or flap tear can be repositioned to cover the wound bed.

Type 2: A partial flap loss that cannot be repositioned to cover the wound bed.

Type 3: Skin tear has total flap loss, exposing the entire wound bed.

The correct response is “False.”

Skin likes a slightly acidic environment. As moisture accumulates on the skin or in skin folds, the skin's pH becomes more alkaline, increasing the potential for microorganism growth. Therefore, alkaline skin products should be avoided. Care interventions should keep the skin slightly acidic to promote a healthy stratum corneum and decrease bacteria growth.^{33,34}

31. I feel confident in my ability to apply or change the following types of ostomy skin barriers and pouches:

Colostomy

	2019
Yes	76%
No	10%
Sometimes	14%

Ileostomy

	2019
Yes	69.5%
No	16%
Sometimes	14.5%

Urinary diversion (ileal conduit, urostomy)

	2019
Yes	57%
No	26%
Sometimes	17%

Applying ostomy pouches on any stoma is challenging and sometimes difficult. Often numerous attempts with different pouches are necessary. Nurses with specialized ostomy education may be available in some settings to teach direct care nurses and patients how to apply ostomy pouches. Consult relevant ostomy guidelines for further information.^{5,6}

32. A pressure injury on the mucosa should be staged using

the NPIAP staging/classification system.

	2019
Yes	28%
No	25%
I don't know	47%

Mucosal membrane pressure injuries cannot be staged using the NPIAP staging system. The mucosa is not the same as the skin as it does not keratinize.³⁵ NPIAP staging is based on skin, not mucosa.³⁶ Mucosal membrane pressure injuries are found on mucous membranes with a history of a medical device in use at the location of the injury.

Conclusion

These survey results include improving nurses' skin and wound care knowledge. However, nurses would benefit from additional education and skill acquisition in several content areas. Survey participants identified needs for more education in some content areas; these should be incorporated into nursing school curricula and nursing professional development. ■

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