

Skin Care Rituals That Do More Harm Than Good

Do you follow old skin and wound care customs that don't stand up to scientific scrutiny?

By Susan M. Skewes, RN, ONC

If you or a loved one has ever been a patient in a hospital or nursing home and developed a pressure sore, call 1-800-555-SORE. You are entitled to cash awards for unnecessary pain and suffering from this preventable illness. Call now and talk with an attorney at no cost to you. We get paid when you get paid."

That pitch, delivered in a television commercial for a local law firm, certainly got my attention. As an orthopedic nurse clinician, I'm very much concerned with skin and wound care, since my patients are at high risk for skin impairment.

I knew that hospitals were beginning to see lawsuits involving pressure sores. But when this appeal by lawyers to potential litigants was broadcast into my living room, I knew that my practice and those of my fellow nurses were under scrutiny.

'Business in bedsores'

Perhaps it shouldn't have been such a surprise that lawyers see "business in bedsores." Prevalence of pressure ulcers in acute care hospitals is greater than 9%, according to research cited in a recent clinical practice guideline sponsored by the Agency for Health Care Policy and Research (AHCPR). In skilled care facilities and nursing homes, it runs as high as 23%. Two out of three elderly patients hospitalized for femoral fractures develop pressure ulcers, as does one of three critical care patients, the guideline points out.

Treatment of pressure ulcers has been estimated to cost from \$5,000 to \$40,000 per lesion—not including costs related to lawsuits. The AHCPR guideline cites a cost to the nation of more than \$1.3 billion a year. Harder to quantify are the suffering and disability that patients who develop a pressure ulcer experience.

Over the years, a lot of research has been done on skin and wounds and how to prevent and manage pressure ulcers. The AHCPR guideline on pressure ulcer treatment and its previous guideline on prediction and prevention of ulcers are based on this research. All too often, however, nurses and other health

professionals fail to apply research findings in practice. Some of us continue to engage in skin and wound care rituals that are based on neither sound theory nor research and may in fact do more harm than good. I call these rituals "voodoo" skin care.

Why do we cling to these rituals? Colleagues I've questioned about their practices often reply that they've "always done it this way" or that they're following what they learned in school or from respected mentors or colleagues. Neither of these explanations, of course, is a defense against a malpractice suit brought by a patient who developed a pressure ulcer under your care. You'll be judged according to the "standard of care," and documents like the AHCPR guideline (in addition to hospital policies and procedures) are being used by plaintiff attorneys to establish that standard.

To protect your patients and yourself, make sure your care is based on research, not ritual. Here's a look at a few of the most common but questionable skin and wound care practices and the cases against them.

Daily bath—whether or not the patient needs it

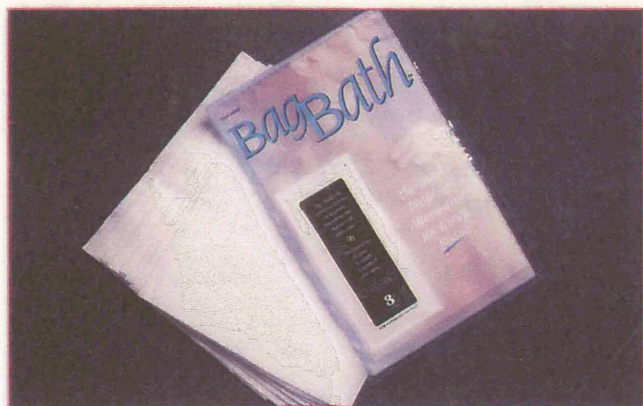
Even though we know that patients don't, physiologically speaking, require bathing everyday, the bed bath is one standard by which we judge the quality of nursing care. Though baths are more often delegated to assistive personnel today, nurses' dedication to bathing patients daily costs time that could be better spent. On my unit bed baths took an average of about 30 minutes per patient.

More than wasting time, daily baths can dry out the skin. It's well documented that moist skin is less prone to breakdown and heals faster than dry skin. Conversely, some research has linked dry, flaky, or scaling skin to an increased incidence of pressure ulcers.

The AHCPR pressure ulcer prevention guideline states: "Skin should be cleansed at time of soiling and at routine intervals. The frequency of skin cleansing should be individualized according to need and/or patient preference. Avoid hot water, and use a mild cleansing agent that minimizes irritation and dryness of the skin. During the cleansing process, care should be taken to minimize the force and friction applied to the skin... Environmental factors leading to skin drying, such

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A British study found that a patient may actually end up



The skin cleansing product developed by the author uses an absorbent cotton cloth containing no-rinse surfactants.

as low humidity (less than 40%) and exposure to cold, should be minimized. Dry skin should be treated with moisturizers.”

Using harsh soaps

Harsh soaps and drying powders add to the damage done by too much bathing. Nursing and medical research has found that the use of nontherapeutic soap, like frequent baths, puts the elderly at risk for dry skin. Soap is a powerful degreaser that emulsifies fats and removes lipids, which bind water, from the skin. Loss of these lipids results in skin dryness.

Most soaps alter the pH of human skin, which normally ranges in adults from 4.5 and 5.5. The skin's mild acidity is an effective antimicrobial barrier. Sebum, produced by the sebaceous gland in the hair follicle, moves up through the follicle to the surface of the skin where it mixes with dead skin cells to form an acid mantle. Sebum has natural fungicidal and bactericidal properties that aren't yet understood.

Soap is alkaline, with a pH as high as 10 to 12. The soap and water basin bath makes rinsing difficult, and soap often remains on the skin, elevating its pH and possibly reducing the antimicrobial property of the acid mantle. What's more, soap can destroy sebum.

To worsen matters, bar soap can become a haven for the growth of bacteria. In fact, it's been identified by infectious disease researchers as an inanimate vector of infection.

Soap used in routine patient bathing should be liquid, nonantimicrobial, and neutral in pH, and must contain moisturizers. Reserve antimicrobial soap for your own hands.

Reusing dirty washbasins

The plastic or stainless steel washbasin is a standard accoutrement of the bed bath ritual. But unless they're completely dried, equipment and supplies, including washbasins and washcloths, will eventually be contaminated with gram-nega-

tive organisms. For this reason, washbasins should be disinfected and thoroughly dried between use. In practice, we often give them a cursory rinse and store them in the bedside stand, right next to the bedpan. I've seen patients vomit in their washbasin one day and wash out of it the next.

Adding oils to bath water makes things worse. It's very good for the skin, but after bathing the oils are virtually impossible to remove from the basin and make a great medium for bacterial growth and proliferation. Another common bed bath pitfall is not changing the bath water often enough, so the dirt removed from the patient is in effect reapplied to him.

Given such problems, one British study found, the patient may actually end up microbiologically dirtier after his bed bath than before. This led me to develop an alternative to basin bathing, which was evaluated at my hospital and is now on the market (see *For Bed Baths, a Brand New Bag*, opposite).

Drying out wounds

In the early 1960s, work by wound researcher George Winter determined that moist wounds heal faster and with less scar tissue than dry wounds. The scab formed by wound drying, Winter found, impedes the movement of epidermal cells in the healing process. Later studies supported Winter's findings and revealed that a moist environment enhances the synthesis of collagen in dermal repair. Today, moist wound healing is accepted by experts as the standard of practice.

Yet, 30 years later we continue to see practices that cause excessive drying. I've seen wounds not only exposed to air but to heat lamps. The use of gauze dressings can have the same effect, as can the use of powders or alcohol or some other disinfectants.

'Disinfecting' uninfected wounds

I once worked with a surgeon who prescribed daily dressing changes that included painting perfectly healthy surgical wounds with iodine. This and many other antiseptics can destroy fibroblasts, which are essential to wound healing. The surgeon, however, was a tough customer. Despite the seemingly countless papers I presented him on iodine's damaging effects, he remained unconvinced. His argument was simply, "I've always done it this way."

He wasn't the only clinician I've encountered who's "disinfected" uninfected wounds with potentially harmful antiseptics or other preparations. I've seen wounds painted with everything from antacids to sodium hypochlorite. The use of nontherapeutic cleansers and routine wound disinfection is still common.

Soap is one of the disinfectants that may do more harm than good to clean wounds. A 1967 report on a study of the effects of disinfectants concluded that soap damaged tissue and interfered with tissue functions, thereby increasing the injury already existing in damaged tissue.

The AHCPR pressure ulcer prevention guideline specifically

microbiologically dirtier after his bed bath than before.

advises against cleaning ulcer wounds with skin cleansers or antiseptic agents (such as povidone-iodine, iodophor, sodium hypochlorite solution [Dakins solution], hydrogen peroxide, or acetic acid) because they're cytotoxic. George Rodeheaver of the University of Virginia School of Medicine in Charlottesville, who has extensively studied the effects of topicals on cells, offers an easy-to-remember rule of thumb: Don't put

FOR BED BATHS, A BRAND NEW BAG

As the nurse clinician for the orthopedic department at Lawrence Memorial Hospital in New London, Connecticut, I oversaw care of all our orthopedic patients. When it came to skin and wound care, I didn't always like what I saw. It seemed that medicine frequently deferred to nursing, which, in turn, often made treatment decisions based on opinion and custom. I decided to write a skin and wound care protocol to help physicians and nurses update their skills and improve care. Little did I know that my efforts would lead me to develop a new approach to that old nursing ritual—the bed bath.

Reviewing the literature, I discovered the problems associated with basin bathing—that it could dry skin and actually increase skin contamination. Thinking there had to be a better way, I did further investigation into what skin required to be clean and healthy. For example, I learned that surfactants could clean as well as soap did, without leaving the skin dry. Applying this knowledge, I developed in 1990 an approach I called the “bag bath.” As I originally conceived it, the method called for standard washcloths to be dipped in reconstituted liquid no-rinse soap, wrung out, and packaged in a plastic bag. To avoid cross-contamination, each cloth was designated for use on a specific area of the body. We let the body dry through evaporation.

This process eliminated the need for basins, bar soap, towels, and lotions, and it saved nursing time. Conducting a research project, I also found that nurses and patients on the unit liked the “bag bath.” Most important, we saw an improvement in patient skin condition.

Unfortunately, two major problems arose with the “hand-made” bag baths. We experienced quality control difficulties in producing the baths. And the manufacturer of the cleanser we were using recommended against using it in the bag baths. In 1994, I approached a manufacturer, Incline Technologies (Incline Village, NV), asking for help in refining my creation. The result, launched on the market in August of that year, is a prepackaged product quite different in certain respects from my original concept but bearing the same name.

The Bag Bath uses a nonwoven soft cotton blend cloth that's highly absorbent but reduces the friction and risk of tissue damage associated with standard washcloths. The cloth contains a proprietary blend of effective no-rinse surfactants that clean without damaging the protective acid mantle of the skin. The solution also contains vitamin E and an emollient/humectant to attract and trap moisture on the skin.

Today, and as I travel the country, I'm amazed at how many institutions are using the Bag Bath. I've learned that when we put theory into practice, nurses can redefine patient care.

in a wound what you wouldn't put in your eye. Normal saline passes this test.

The AHCPR pressure ulcer prevention guideline also states that routine wound cleansing should be accomplished with a minimum of chemical and mechanical trauma. Unfortunately, it's a common practice to debride wounds that don't need debriding. Another surgeon with whom I worked prescribed normal saline wet-to-dry dressings for every wound he treated. Removing an adherent dressing is considered appropriate only for debriding a necrotic wound; in other cases it only disrupts the wound bed and causes the patient unnecessary discomfort. When I asked him why he used this technique on clean wounds, he replied, “My chief in medical school taught me. If it's good enough for him, it's good enough for me.”

Challenge of research-based practice

Decades ago, when less was known about skin, wounds, and healing, it was perhaps more acceptable for practice to be based on trial-and-error or tradition. But as research reveals the secrets of skin, clinicians must incorporate this knowledge into their care. That isn't always easy. For example, nurses have had to become familiar with a wide variety of dressings designed for different kinds of wounds and different stages of healing. Today, applying the wrong dressing, it's been observed, may be as negligent as administering the wrong medication.

It can be particularly challenging to rethink and, if necessary, change routine practices, such as the bed bath. But we can help our patients enormously by reexamining our skin care rituals and putting research findings into practice. □

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