Skin Health

Discovery assessments: improving post-acute skin health practices

The discovery assessments are a tool used by Medline Industries in partnership with healthcare facilities to help identify gaps in clinical practice, and ultimately provide evidence-based recommendations to improve clinical practice. From March 2019 through fall 2020, Medline performed six skin health discovery assessments that included 12 participating post-acute healthcare facilities and nursing homes.

The discovery assessments that focused on post-acute skin care practices consisted of on-site rounding with clinical staff, and more than 300 knowledge and attitude surveys completed by registered nurses (RNs), licensed practical nurses (LPNs) and certified nursing assistants (CNAs).

The discovery assessments in skin health revealed notable gaps in clinical practice in three areas: infection control, product utilization and wound care technique.

Infection control

Infection control practices are integral to any clinical practice. As many as 70% of healthcare-associated infections can be prevented when healthcare professionals adhere to best practices in infection control.[1] Healthcare-associated infections (HAIs) cause approximately 75,000 deaths annually, in addition to increased healthcare costs and an increased risk of morbidity.[2]

Hand hygiene

One highly effective infection control practice is proper hand hygiene performed by healthcare workers. Hand hygiene is considered to be one of the primary mechanisms to significantly reduce risk of transmission of infectious agents due to contact between individuals. However, a 2010 literature review found that only 40% of healthcare workers in hospitals around the world complied with recommended hand hygiene practices.[3]

In all six discovery assessments, hand hygiene was the top error observed among RNs, LPNs and CNAs during clinical practice.

The current recommendations outlined by the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) state that at minimum, healthcare workers should perform hand hygiene by hand-washing with soap and water or using an alcohol-based hand sanitizer before and after every patient encounter, before eating, and before using the restroom.[1, 4]

Infection control is particularly important in skin care practices to prevent infection from contact with skin, because healthcare-associated pathogens can not only be transmitted from infected or draining wounds, but also from the hands or gloves of healthcare workers that may be contaminated with potentially harmful pathogens from frequently colonized intact patient skin.

Proper hand hygiene, in addition to other infection control practices such as keeping a clean workspace and using sterilized products and kits, can limit infections during common skin health procedures such as dressing changes. Several studies detailed in a WHO guide on hand hygiene in long-term care facilities also show that increased hand hygiene compliance in long-term care facilities may be associated with a significant decrease in HAIs.[5] In addition, proper hand hygiene may help limit the spread of Coronavirus Disease 2019 (COVID-19) and other pathogens within healthcare facilities.[4]

Wound care technique

Best practices in wound care are essential for providing effective skin care and wound management for patients and residents. Older adults who have multiple comorbidities are especially at risk for skin conditions such as skin tears, pressure injuries and moisture-associated skin damage (MASD).[6, 7, 8] In addition, patients and long-term care residents in post-acute settings are at high risk for skin frailty and the development of pressure injuries due to limited mobility, and age-related skin thinning and decreased skin elasticity.[8] Appropriate training for nurses and other healthcare professionals in wound care best practices can help optimize skin health for at-risk patients and residents.[9]

Skin tear prevention

Skin tears are a prevalent skin condition that affect at-risk populations. According to the International Skin Tear Advisory Panel (ISTAP), skin tears pose a high risk for older patients and residents, as 1.5 million skin tears occur annually among hospitalized older adults in the United States.[6, 8]

In the CNA Knowledge Assessment evaluation, 84% of surveyed CNAs did not know that residents and patients who require the most assistance with activities of daily living (ADL) are at the highest risk for skin tears.

Dependence on others for performing activities of daily living (ADL) is a non-modifiable risk for skin tears, in addition to impaired mobility and evidence of a previously healed skin tear.[6] Most skin tears are preventable. Identifying patients and residents who are at high risk for skin tears, in addition to a comprehensive skin care regimen, can help prevent skin tears and other skin injuries.[6]

Pressure injury prevention and inconsistencies in wound measurements

Pressure injuries are also common among older patients and residents and can complicate treatment and impact quality of life.[7] Pressure injuries require comprehensive wound care and skin care practices to promote healing.

Consistent wound measurements are a wound care practice that is critical in the management of pressure injuries. Regular monitoring of wounds and consistent wound measurements provide an objective evaluation of the healing progress.[7] Qualitative wound measurements using a ruler or wound tracing should be utilized to accurately evaluate the wound size, and the surface area and volume of a wound.[7]

In four out of six discovery assessments, inconsistencies in wound measurements was a top error in observed wound care technique among RNs and LPNs.

The National Pressure Injury Advisory Panel (NPIAP) 2019 Clinical Practice Guideline strongly recommends using a uniform, consistent method for measuring pressure injury size and surface area. Using a consistent method of measurement provides accurate comparisons of wound measurements across time.[7]

Moreover, pressure injuries can also be prevented with regular patient or resident cleansing, daily moisturizing, and turning and repositioning based on a patient or resident's activity level and ability to reposition on their own.[7]

Moisture-associated skin damage (MASD) practices

MASD occurs when the skin is exposed to excessive moisture and causes skin damage by disrupting the skin barrier function. MASD leaves the skin vulnerable to irritants, contaminants and increased friction. Sources of moisture can include urine or fecal incontinence, perspiration, or wound exudate. MASD is associated with an increased risk for bacterial or fungal infections, dermatitis and pressure injuries.[10]

Incontinence-associated MASD can be prevented by keeping the skin regularly clean and dry of excess moisture, especially within deep skin folds.[10] In addition, a daily moisturizer or skin barrier cream should be used daily to replenish natural moisture and prevent future skin damage.

In the RN/LPN Knowledge Assessment evaluation, 80% of surveyed RNs and LPNs did not know that silicone is the best breathable barrier protection for incontinence.

Silicone-based barrier products, such as dimethicone products, are effective in protecting the skin from incontinence-associated skin damage because dimethicone is permeable to water vapor that allows for the evaporation of perspiration, and minimizes skin irritation.[10]

Product utilization

Skin care products must be appropriately and correctly utilized to adhere to skin care best practices for patients and residents. Appropriately utilizing skin care products can improve skin care practices within a healthcare facility, and the use of standardized skin care products and protocols can be clinically effective at preventing skin conditions.[11]

Dressing changes

Wound dressings are effective in protecting wounds from contaminants, and help provide an environment that promotes healing. However, a wound dressing must be used correctly to maximize efficacy.

In four out of six discovery assessments, errors in daily wound dressing changes were the top errors observed during clinical practice among RNs and LPNs.

The NPIAP recommends following the manufacturer's recommendations in regards to the frequency of dressing change, which may not require a daily dressing change.[7] In addition, the NPIAP also recommends evaluating a pressure injury with each dressing change to evaluate the healing progress and determine the appropriate intervals for dressing changes.[7]

Skin care products

The correct utilization of skin care products can help keep skin clean and moisturized and prevent skin damage or injury for at-risk patients and residents. Appropriate skin care products that promote a skin care regimen include using pH-balancing cleansers, moisturizers such as emollients and skin barrier products and antifungal products.[8]

58% of surveyed RNs and LPNs did not know that the manufacturer's recommendation for the proper utilization of topical antifungal products require they be applied for 14 days.

Cost savings and implementing comprehensive skin health

The skin health discovery assessment findings can better inform how participating facilities can educate staff in wound management, skin care and infection control best practices, and how to appropriately utilize skin care and wound care products.

Providing education in these practice areas and appropriately utilizing products may not only improve the skin health of patients and residents, but may also provide significant cost savings for healthcare facilities. Data analyses show that infection control practices are cost-effective for avoiding costs associated with HAIs in healthcare facilities.[12, 13]

In addition, pressure injury prevention strategies that utilize preventative skin care practices can be particularly cost-effective for long-term care facilities. A 2013 U.S. Medicare study reported an estimated $11 billion associated with the cost of pressure injury care.[14] In a cost-effectiveness analysis, it was shown that the use of pressure-redistribution mattresses, the use of emollients to prevent dry skin, and the replacement of soap and water with a foam-based cleanser were product utilization practices that improved pressure injury prevalence among high-risk long-term care residents and appeared to be cost-effective.[11]

$106

Mean weekly cost attributed to **additional care for treatment of stage II pressure ulcer**[11]

$128

Mean weekly cost attributed to **additional care for treatment of stage III/IV pressure ulcer**[11]

$1.66

Mean weekly cost of upgrading to a **pressure redistribution foam mattress** (over a resident's lifespan)[11]

$6.51

Mean weekly cost of using a **skin emollient for high-risk residents**[11]

$2.80

Mean weekly cost of replacing **soap and water with a foam-based cleanser**[11]

In addition, the use of standardized preventative skin care products and skin care protocols in post-acute care settings can not only be clinically effective in preventing pressure injuries and other common skin conditions, but can also be cost-effective.[15, 16]

Addressing practice gaps in the areas of infection control, wound care technique and product utilization are a first step in improving clinical practice in skin health and reducing costs for post-acute healthcare facilities. Ultimately, a comprehensive approach to skin health must be utilized to provide sustainable improvement in skin health for patients and residents.
Comprehensive skin health strategies include:

Preventative skin care practice to prevent skin injuries and pressure injuries

Developing protocols and policies to promote infection control

Appropriately **identifying patients at high risk** of skin injury

Providing ongoing clinician and staff education in skin care and pressure injuries

Utilizing skin health resources and products

Developing protocols and policies to promote the use of standardized wound care technique and the use of standardized products

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