

This reference guide is to assist Physicians, Practitioners and Clinicians with their role in assisting Long Term Care Facilities with the prevention and treatment of pressure ulcers.

A pressure ulcer is any lesion caused by unrelieved pressure that results in damage to the underlying tissue. Although friction, shear and moisture are not primary causes of pressure ulcers, friction, shear and moisture are important contributing factors to the development of pressure ulcers. Pressure ulcers are generally found over bony prominences. Pressure ulcers are staged according to their extent of tissue damage. The current definitions for the stages of pressure ulcers are:

- **Stage I:** An observable, pressure-related alteration of intact skin, whose indicators as compared to an adjacent or opposite area of the body may include changes in one or more of the following parameters: Skin temperature (warmth or coolness), Tissue consistency (firm or boggy), sensation (pain or itching) and/or a defined area of persistent redness in lightly pigmented skin, whereas in darker skin tones, the ulcer may appear with persistent red, blue or purple hues.
- **Stage II:** Partial thickness skin loss involving epidermis, dermis or both. The ulcer is superficial and presents clinically as an abrasion, blister or shallow crater.
- **Stage III:** Full thickness skin loss involving damage to, or necrosis of, subcutaneous tissue that may extend down to, but not through, underlying fascia. The ulcer presents clinically as a deep crater with or without undermining of adjacent tissue.
- **Stage IV:** Full thickness skin loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures (e.g., tendon, joint capsule). Undermining and sinus tracts also may be associated with Stage IV pressure ulcers.

RESOURCES

- www.wocn.org (Wound, Ostomy & Contenance Nurse Society)
- www.ahrq.gov (Agency for Health Care Research and Quality)
- www.amda.org (American Medical Directors Association)
- www.npuap.org (National Pressure Ulcer Advisory Panel)
- www.medqic.org (Medicare Quality Improvement Community Initiatives)
- www.healthinaging.org (Sponsored by The American Geriatrics Society)

This was developed for implementation of the 2004 Centers for Medicare and Medicaid Services – Pressure Ulcer Prevention and Treatment Guidelines and Investigative Protocols.

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A Physician's, Practitioner's & Clinician's Reference Guide for Pressure Ulcer Prevention & Treatment

The Physician/Practitioner can assist a facility by:

- Ensuring proper diagnosis and prognosis of the wound. Many lower extremity wounds caused from arterial insufficiency, venous insufficiency and/or peripheral neuropathy are inappropriately diagnosed as pressure ulcers.
- Becoming familiar with the facility's policies, procedures and protocols for pressure ulcer prevention and treatment.
- Becoming familiar with current standards of practice for pressure ulcer prevention and treatment
- Taking an active role in assessing and developing a regimen relevant to preventing or treating a wound and responding appropriately to any notice of changes in condition (the facility must notify the Physician/Practitioner when a wound develops, declines or fails to heal)

At a minimum the following prevention and treatment strategies should be in place:

PREVENTION INTERVENTIONS

- Daily monitoring of the skin with a weekly skin inspection by licensed staff
- A comprehensive risk assessment upon admission, weekly for the first four weeks after admission, with each change of condition and quarterly
- Provide appropriate pressure reduction in the bed & sitting surface (PT/OT may be a good resource). **Static surfaces** are non-powered, usually foam and should replace the entire mattress (egg-crates are not considered pressure reduction surfaces). Static surfaces should be used for prevention and non-complicated stage I ulcers. **Dynamic surfaces** are powered surfaces and there are two types, low-airloss and air-fluidized. Low-airloss surfaces have air chambers. They are appropriate for stage II ulcers and non-complicated stage II-IV. Air-Fluidized beds have air blown through ceramic beads creating a fluidized motion. These are for

flaps or grafts and complex stage III or IV wounds not healing on a low-airloss surface.

- Do **NOT** use donut or ring type devices
- Institute an **individualized** turning and repositioning schedule
- Pad and protect bony prominences (note: sheepskin, heel and elbow protectors provide comfort and reduce shear and friction, but do NOT provide pressure reduction).
- Do NOT massage over bony prominences
- Float heels (on pillows or devices that support the entire calf, but float the heels)
- Keep skin clean and dry
- Peri-care after each incontinence episode, including the application of a skin barrier
- Bowel and Bladder program when appropriate
- Foley catheter and/or fecal tubes/pouches as appropriate
- Corn starch to wick up moisture (no powders)
- 4x4's or dry cloths between skin folds
- Bathe with mild soap, rinse and gently dry
- Moisturize dry skin
- Provide adequate nutrition and hydration (Dietary is a good resource). It is recommended that protein intake of 1.2-1.5 gm/kg of body weight/day & 35-40 kcalories/kg of body weight/day. Provide multivitamins as appropriate (additional vitamins and minerals may only be indicated if the resident has a specific vitamin or mineral deficiency)
- Provide adequate pain relief
- Monitor and manage diabetes
- Provide appropriate referrals for psychosocial needs and/or to a podiatrist and/or a wound consultant
- Educate and involve the resident and/or family members

TREATMENT INTERVENTIONS

The treatment of a pressure ulcer should include those interventions already listed as well as the following topical treatment interventions:

- Provide a **MOIST** environment for wound healing
- Cleanse wounds initially and at each dressing change
- Normal saline is the preferred cleansing agent
- Use safe and effective irrigation pressures from 4-15 psi.
- Wounds with adherent materials may benefit from non-cytotoxic commercial cleansers
- Utilize skin preps/sealants to protect the surrounding skin

- Eliminate wound dead space by **LOOSELY** filling all cavities
- Do **NOT** use topical antiseptics: Dakins solution, povidone iodine, iodophor, hydrogen peroxide and acetic acid. Instead to decrease the bacterial load of a wound use products containing silver (it is not cytotoxic to the wound bed)
- Remove all devitalized tissue from the wound bed. However, stable heel ulcers with protective eschar with **NO S/S** of infection should **NOT** be debrided
- Use an appropriate safe form of debridement. Autolytic is safe and selective and is done by providing a moist environment to the wound bed. If autolytic is too slow then the use of an enzymatic debriding agent maybe necessary. If there is S/S of infection immediate use of sharp or surgical debridement by the Physician or Practitioner may be necessary. The use of mechanical debridement (wet-to-dry, whirlpools, etc) should only be used when no granulation tissue is present as it is non-selective and can be painful and lead to bleeding (note a wet-to-dry dressing should be ordered for debridement **ONLY**)
- If the wound edges are rolled under debridement with a silver nitrate stick by the Physician or Practitioner maybe necessary to stimulate healing. Also, callused wound edges must be debrided.
- Treatment with topical antibiotics when localized S/S of infection. Do not use topical antibiotics for prevention. If the resident has S/S of systemic infection (sepsis, cellulitis, osteomyelitis, bacteremia, etc.) then systemic antibiotics are necessary.
- When a wound bed is **dry** the use of hydrogels, transparent films and/or hydrocolloids are appropriate (do not use hydrocolloids or transparent films on infected wounds)
- When a wound bed is **draining** the use of foams and calcium alginates are appropriate
- When ordering topical dressings use the category name (hydrogel, foam, etc.) instead of the name brand product
- Adjunctive therapy (e.g., E-Stim, the V.A.C, growth factors, skin equivalents, etc), should be utilized on chronic wounds that have not responded to conventional treatment

