Wound Care: The Basics

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May, 2010
What Type of Wound is it? How long has it been there?

- **Acute**—generally heal in a couple weeks, but can become chronic:
  - Surgical
  - Trauma

- **Chronic**—do not heal by normal repair process—takes weeks to months:
  - Vascular-venous stasis, arterial ulcers
  - Pressure ulcers
  - Diabetic foot ulcers (neuropathic)
Chronic Wounds

Ischemic ulceration secondary to PAD
Pressure Ulcer Staging
Where is it?

- Where is it located?
  - Use anatomical location-heel, ankle, sacrum, coccyx, etc.

- Measurements-in centimeters
  - Length X Width X Depth
    - Length = greatest length (head to toe)
    - Width = greatest width (side to side)
    - Depth = measure by marking the depth with a Q-Tip and then hold to a ruler
1. Center over area to be measured.
2. Each circle is numbered in centimeters to indicate the diameter of the affected area.
3. The cross hairs are ruled in millimeters.
4. Dispose after use.

Please see enclosed full prescribing information.
Wound Characteristics:

- Describe by percentage of each type of tissue:
  - Granulation tissue:
    - red, cobblestone appearance (healing, filling in)
  - Necrotic:
    - Slough-yellow, tan dead tissue (devitalized)
    - Eschar-black/brown necrotic tissue, can be hard or soft
Evaluating additional tissue damage:

- **Undermining**
  - Separation of tissue from the surface under the edge of the wound
    - Describe by clock face with patients head at 12 ("undermining is 1 cm from 12 to 4 o’clock")

- **Tunneling**
  - Channel that runs from the wound edge through to other tissue
    - “tunneling at 9 o’clock, measuring 3 cm long”
Wound Drainage and Odor

- **Exudate**
  - Fluid from wound
    - Document the amount, type and odor
      - Light, moderate, heavy
      - Drainage can be clear, sanguineous (bloody), serosanguineous (blood-tinged), purulent (cloudy, pus-yellow, green)

- **Odor**
  - Most wounds have an odor
  - Be sure to clean wound well first before assessing odor (wound cleanser, saline)
    - Describe as faint, moderate, strong
Condition of Periwound

- Consider use of Skin Prep or equivalent product to protect periwound tissue
- Periwound-tissue around wound
  - Viable, macerated, inflamed
    - Color-erythema (purple appearance on dark skin), pale
    - Texture-dry, moist, boggy (soft), macerated (white, soggy appearance), edema
    - Temperature-cool, warm
    - Skin integrity-lesions, excoriation, maceration, denuded (loss of epidermis)
Is the wound infected?

- All wounds are contaminated, but not necessarily infected:
  - Contamination-microorganisms on wound surface
  - Colonization-bacteria growing in wound bed without signs or symptoms of infection
  - Critical colonization-bacterial growth causes delayed wound healing, but has not invaded the tissue
  - Infection-bacteria invades soft tissue, causes systemic response

  - Inflammation, pus, increase/change in exudate, fever, pain, delirium in elderly
Other factors that contribute to wound healing:

- Nutrition/hydration
  - Protein

- Circulation
  - Pressure relief
  - Oxygenation
  - No tobacco

- Edema

- Glucose control - Diabetics
PUP—the highpoints

- Minimize friction, shear, and pressure
  - Repositioning every 1-2 hours
    - Necessary even when using specialty beds, in chair
  - HOB <30 degrees
  - Elevate heels

- Incontinence
  - Scheduled toileting
  - Frequent changing, skin barrier

- Nutrition
  - R.D. assessment
  - Calories, protein, supplements

- Education
  - Staff, resident, families
Dressings - The Basics

**DO:**
- Relieve pain, especially prior to dressing change
- RELIEVE PRESSURE!
  - TURN AT LEAST EVERY 1-2 HOURS!
  - Consider specialty support surfaces for bed/chair
- Fill in dead space if wound is deep
- Protect skin from incontinence by using barrier cream
- Protect periwound tissue by using Skin Prep

**DO NOT:**
- DO NOT use wet-to-dry dressings!
- DO NOT wrap tape completely around an extremity!
  - Tourniquet effect
- DO NOT pull dressing off a wound
  - Can cause further tissue damage
    - Soak to remove
Dressing selection

- Determined by condition of the wound bed
- Determine dressing according to amount of exudate (drainage)
- Consider cost and availability of dressings at your institution $$$$
- Assess wound at least every 2 weeks and change treatment if not improved
- If not healing or questions about dressing selection, consult WOC nurse
Cleansing the wound bed:

- Be gentle!
- Saline or wound cleanser
Eliminating necrotic tissue:

- Necrotic tissue increases bioburden
  - Contamination vs. colonization vs. infection
- Debridement-remove devitalized tissue
  - Autolytic-body’s enzymes in drainage
  - Enzymatic-Santyl
  - Sharp-surgical
  - Biologic-maggots
- If malodorous wound, try Xeroform gauze or Flagyl gel
Management of devitalized tissue

- Eschar-black necrotic tissue
- Slough-soft, moist, avascular tissue
- Firm, dry, stable eschar should not be debrided from heels
  - May not have adequate circulation to heal wound
Dressings:

- Manage drainage while maintaining a moist environment
  - Maceration
  - Excoriation

- Basically 5 categories:
  - Films
  - Hydrogel
  - Hydrocolloids
  - Alginate
  - Foam
Dressings that add moisture

- Films - retain moisture, protect from infection
- Hydrogel - creates moist environment, not for excessive drainage
- Hydrocolloid - moist environment, promotes autolytic debridement
Dressings that absorb moisture

- Foams for moderate drainage
- Calcium alginate for moderate to heavy drainage, hemostasis
Control of wound bioburden:

- Antimicrobial dressings for wound contamination
  - Antibiotics only for infected wounds (not just colonized/contaminated)

- Cultures not generally recommended because all wounds are contaminated
  - If culture indicated, cleanse wound bed with saline, then express drainage from wound bed.
Specialty Dressings

- Antimicrobial dressings
  - Silver
  - Cadexomer iodine
- Specialty Treatments
  - Vacuum-assisted wound treatments
  - Hyperbaric oxygen treatment
Websites

- John A. Hartford Foundation, Institute for Geriatric Nursing:
  http://www.hartfordign.org/index.html

  How to Try This: Braden scale video/article/CEU’s:
  http://www.nursingcenter.com/prodev/ce_article.asp?tid=751431

- National Pressure Ulcer Advisory Panel:
  http://npuap.org/

- Braden Scale:
  http://www.bradenscale.com/default.htm
Websites

- **Agency for Healthcare Research and Quality:**
  Clinical Practice Guidelines:
  [http://www.ahrq.gov/clinic/cpgonline.htm](http://www.ahrq.gov/clinic/cpgonline.htm)

- **National Guideline Clearinghouse:**
  Guideline for prevention and management of pressure ulcers: