

WOUND BASICS ASSESSMENT & MANAGEMENT

June 2016 Webinar Series

prepared for

State of Maryland

Developmental Disabilities Nursing Team



Presenters-

Baltimore Affiliate Wound Ostomy Continence Nursing Society

Sue Grafton, RN, BSN, CWCN

Brenda Hensley
RN, MSN, CWOCN

Joyce Onken, RN, BSN,
CWOCN

Lisa Owens, RN-BC, MSN,
CWOCN

Sarah Beth Rogers, RN, CWCN

Cindy Walker, MSN, APRN-
CNS, CWON



Objectives Webinar Series 1- Assessment

- 1. Recognize principles of healthy skin care management*
- 2. Identify 4 or more interventions which reduce the risk of pressure injury based on evidence based skin risk assessments*
- 3. Discuss 4 or more components of a comprehensive skin/wound assessment.*
- 4. Differentiate 3 or more interventions and associated wound characteristics that support wound healing.*
- 5. Distinguish 3 or more characteristics of various wound etiologies including moisture associated skin injury, pressure injury, and venous, arterial, and neuropathic ulcers*



Objectives Webinar Series 2- Management

6. *Support wound dressing /treatment selections based on wound product categories associated with 3 or more patient centered assessment findings.*
7. *Appreciate principles of safe negative pressure wound therapy*
8. *Choose appropriate support surface application based on 2 or more unique patient centered needs*
9. *Identify community resources applicable to the chronic wound care management across care settings.*





Impact of chronic wounds

Chronic wounds affect an estimated 6.5 million patients.

More than \$25 billion is spent annually on the treatment of chronic wounds

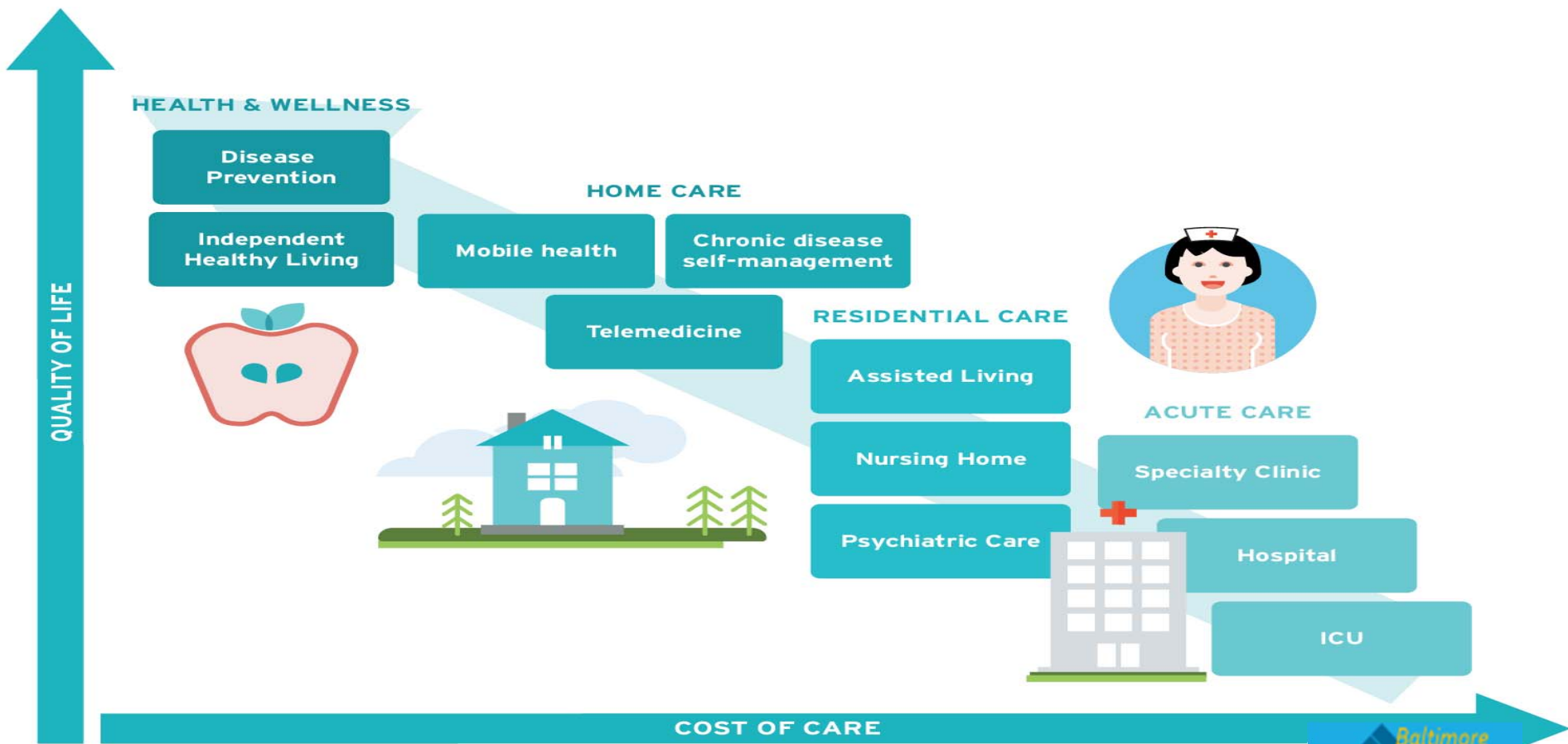
Chronic wounds impact individuals, families, communities, and society

Pain and suffering

Social isolation- can't go to programs

Cross contaminations and spread of resistant organisms





Source: Intel Across Healthcare 2013, |



2014

Common medical problems seen in adult disability clinics



- Early arthritis
- Difficulty sitting for long periods of time with ulcer formation.
- Progression of their movement disorder.
- Mental health issues such as bipolar disorder and depression.
- Progressive loss of ambulation as the patient ages.
- Cervical and lumbar spine problems including myelopathy.
- Progressive hydrocephalus in middle ages.
- Worsening of dysphagia and ability to eat.
- Worsening dental care with dental caries and abscesses.

Target population risk factors influencing skin and wound care management



Nutrition

Oral health

Continence

Behavioral

Caregiver dependence

Cognitive

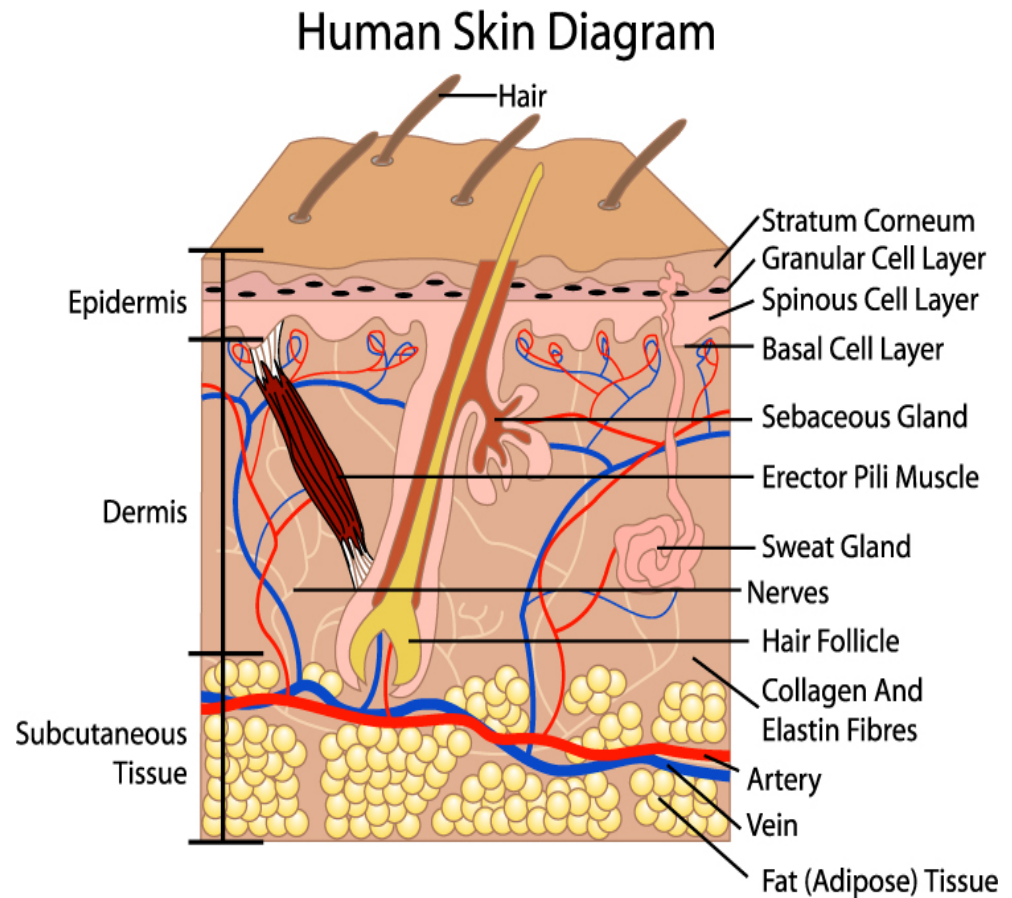
Mobility

Community lifestyle



The Skin

- Weighs 8 lbs/covers 20 sq ft
- Protects body from environment as first line of defense
- Largest organ in our body
- Receives 1/3 of our blood flow
- pH (5.5)



Functions of the Skin

- Protection against the environment
- Fluid and electrolyte balance
- Excretion of waste
- Temperature regulation
- Sensation
- Production of vitamin B folates
- Metabolism – Vitamin D synthesis



Skin changes influenced by

- Age
- Blood vessel diseases
- Diabetes
- Heart /liver disease
- Nutritional and hydration deficiencies
- Obesity
- Reactions to medications
- Stress
- Structural and functional changes



Skin Assessment: Inspect/palpate

All body parts without the presence of clothing, undergarments or shoes

- Skin loss
- Redness
- Turgor
- Lesions
- Skin discoloration
- Edema
- Rash
- Warmth
- Moisture



Skin Check



Heels

Occiput

Toes

Sacrum

Posterior Buttock/Ischium

Over Bony Prominences

Thoracic Spine

Scapula

Medical Devices

Skin Monitoring: Comprehensive CNA Shower Review

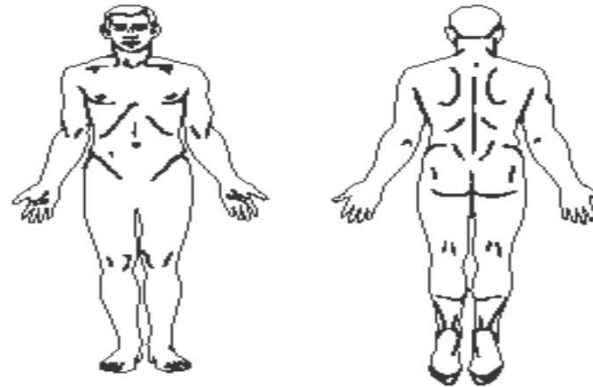


Perform a visual assessment of a resident's skin when giving the resident a shower. Report any abnormal looking skin (as described below) to the charge nurse immediately. Forward any problems to the DON for review. Use this form to show the exact location and description of the abnormality. Using the body chart below, describe and graph all abnormalities by number.

Resident: _____ Date: _____

Visual Assessment

1. Bruising
2. Skin tears
3. Rashes
4. Swelling
5. Dryness
6. Soft heels
7. Lesions
8. Decubitus
9. Blisters
10. Scratches
11. Abnormal color
12. Abnormal skin
13. Abnormal skin temp (h-hot/c-cold)
14. Hardened skin (orange peel texture)
15. Other: _____



CNA Signature: _____ Date: _____

Does the resident need his/her toenails cut?

Yes No

Charge Nurse Signature: _____ Date: _____

Charge Nurse Assessment: _____

Intervention: _____

Forwarded to DON:

Yes No

DON Signature: _____ Date: _____

Document available at www.primaris.org

MO-06-42-PU June 2008 This material was prepared by Primaris, the Medicare Quality Improvement Organization for Missouri, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Adapted from Fall 07 Care Center.

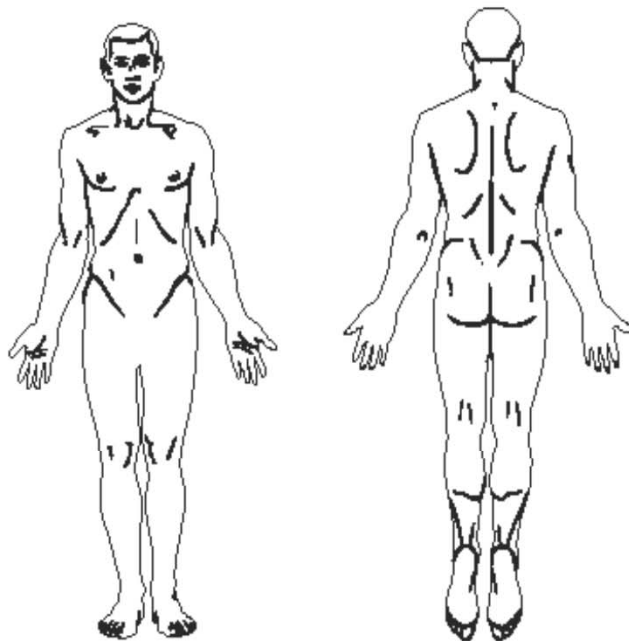
 PRIMARIS
THE QUALITY CONNECTION

Licensed Nurse Weekly Skin Assessment



Resident: _____ Date: _____ Room #: _____

This form should be completed weekly on all residents per facility policy. Any areas of skin requiring treatment should have a thorough record of documentation in addition to this form located elsewhere in the chart per facility protocol. Check "Yes" or "No" if the item reflects the resident's assessment. If the answer is "yes" to 3 or more of the items listed below, consider implementation of the "Skin Tear Prevention Protocol." Review the care plan to ensure skin care is included as necessary.



If any questions are answered "yes," indicate location on body outline with number of question.

Weekly Skin Assessment		Yes	No
1	Any reddened areas that remain after 30 minutes of pressure reduction? <i>Comments:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>
2	Any rashes? <i>Comments:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>
3	Any bruises? <i>Comments:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>
4	Any open lesions, cuts, lacerations, or skin tears? (Indicate even if being treated.) <i>Comments:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>
5	Any blisters? <i>Comments:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>
6	Any open ulcers (indicate even if being treated.) <i>Comments:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>
7	Excessively dry or flaky skin? <i>Comments:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>
8	Any edema? <i>Location:</i> _____	<input type="checkbox"/>	<input type="checkbox"/>

Licensed Nurse Signature: _____

Date: _____

Document available at www.primaris.org

MO-08-09-PU May 2008 This material was prepared by Primaris, the Medicare Quality Improvement Organization for Missouri, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Adapted from Rediff Care Center.

PRIMARIS
MISSOURI QUALITY IMPROVEMENT ORGANIZATION

Basic skin care principles



Skin cleansing at time of soiling & at routine intervals-

Avoid diapering/adult briefs

Avoid hot, harsh soaps

Do not rub /scrub

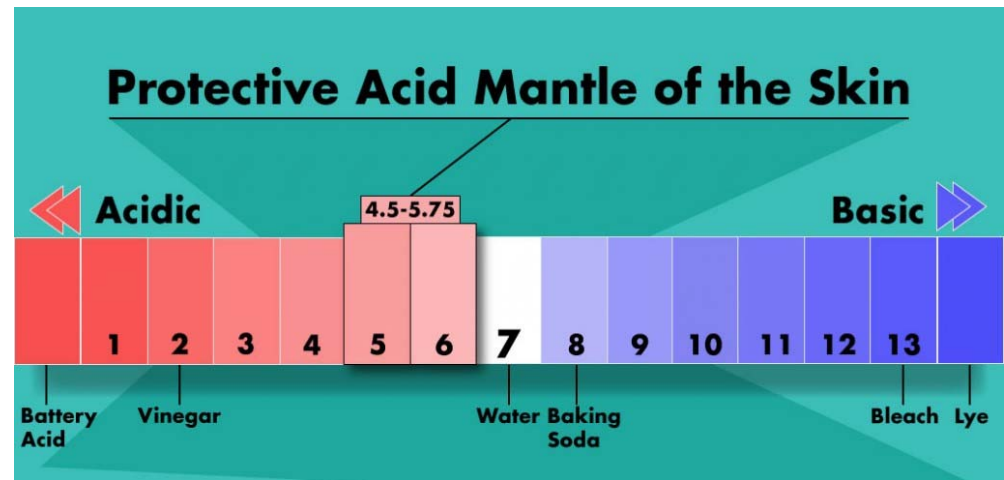
Dry thoroughly

Use pH balanced products

Moisturize daily to dry and threatened skin

Popular Soap pH levels

Soaps	pH
Dove	6
Caress, Oil of Olay	7
Basis, Coast, Lever 2000, Lava, Safeguard, Shield	9
Camay, Dial, Irish Spring, Ivory, Jargons, Tone, Yardley, Nivea, and Zest	10



Pressure Injury

- Elderly
- Bed or Chairbound
- Under or Overweight
- Malnourished
- Incontinence
- Limited sensation
- Decreased mobility
- Decreased mental status



- Dehydration
- Multisystem trauma
- Poor circulation, anemia
- History of previous pressure ulcers
- Diabetes
- Chronic Illness
- Immunosuppressed
- Specific medications

Drugs impact skin risk

Steroids-systemic or inhalers

Chemotherapy

Radiation

Anticoagulant therapy







Immunosuppressant therapy

Hormone therapy



BRADEN PRESSURE ULCER RISK ASSESSMENT

ACT TO PREVENT PRESSURE ULCERS

SENSORY PERCEPTION Ability to respond meaningfully to pressure-related discomfort 	NO IMPAIRMENT Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.	SLIGHTLY LIMITED Responds to verbal commands but cannot always communicate discomfort or ask to be moved or turned OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	VERY LIMITED Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body.	COMPLETELY LIMITED Unresponsive (does not moan, flinch, or grasp) to painful stimuli due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body surface.	4 3 2 1 ADD TO TOTAL SCORE	
MOISTURE Degree to which skin is exposed to moisture 	RARELY MOIST Skin is usually dry; linen only requires changing at routine intervals.	OCCASIONALLY MOIST Skin is occasionally moist, requiring an extra linen change approximately once a day.	OFTEN MOIST Skin is often but not always moist; linen must be changed at least once a shift.	CONSTANTLY MOIST Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every three patient is moved or turned.	4 3 2 1 ADD TO TOTAL SCORE	
ACTIVITY Degree of physical activity 	WALKS FREQUENTLY Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.	WALKS OCCASIONALLY Walks occasionally during day but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	CHAIRFAST Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	BEDFAST Confined to bed	4 3 2 1 ADD TO TOTAL SCORE	
MOBILITY Ability to change and control body position 	NO LIMITATIONS Makes major and frequent changes in position without assistance.	SLIGHTLY LIMITED Makes frequent though slight changes in body or extremity position independently.	VERY LIMITED Makes occasional slight changes in body extremity position but unable to make frequent or significant changes independently.	COMPLETELY IMMOBILE Does not make even slight changes in body or extremity position without assistance.	4 3 2 1 ADD TO TOTAL SCORE	
NUTRITION Usual food intake pattern *NPO: Nothing by mouth. *IV: Intravenously. *TPN: Total parenteral nutrition. 	EXCELLENT Eats most of every meal. Never refuses a meal. Usually eats at least 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.	ADEQUATE Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement if offered. OR is on a tube feeding or TPN regimen, which probably meets most of nutritional needs.	PROBABLY INADEQUATE Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement. OR receives less than optimum amount of liquid diet or tube feeding.	VERY POOR Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement. OR is NPO and/or maintained on clear liquids or IV for more than 3 days.	4 3 2 1 ADD TO TOTAL SCORE	
FRICTION & SHEAR 	NO APPARENT PROBLEM Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during moves. Maintains good position in bed or chair at all times.	POTENTIAL PROBLEM Moves feebly or requires minimum assistance. During a move, skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	PROBLEM Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Contractures, or constant friction.	4 3 2 1 ADD TO TOTAL SCORE		
RISK SCALE EQUIPMENT	NONE 23 22 21 20 19 No additional pressure support required	MILD 18 17 16 15 High specification foam mattress or static air overlay. Consider cushion for chair, Bedcradle/goose-neck.	MODERATE 14 13 Dynamic air overlay, Dynamic air cushion, Dynamic mattress.	HIGH 12 11 10 Replacement or Low Air Loss.	SEVERE 9 8 7 6	TOTAL SCORE USE CHART ON LEFT TO DETERMINE YOUR PATIENT'S RISK

<https://jessbrantnerwvdietics.wordpress.com/tag/braden-scale/>

Reference: "The Braden Scale of Predicting Pressure Sore Risk"

Addressing subscales of risk

Sensory Precautions

- Protection from injury
trauma, heat,
- Foot wear /linen/clothing/bed trash
- Catheter or tubing sites
- Thorough skin check
- PT/OT needs



Activity/Mobility



- **MOVE THAT BUS**
- ADL participation
- Turning routines
- Repositioning if in chair
- Get out of bed
- PT/OT referral

Friction and Shear

- **Friction** is the “mechanical force exerted when skin is dragged across a coarse surface



- **Shear** is a combination of friction and gravity

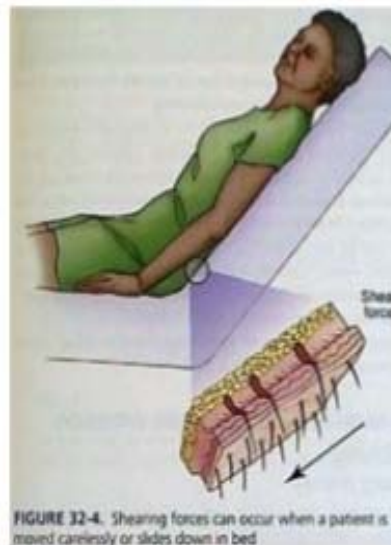


FIGURE 32-4. Shearing forces can occur when a patient is moved carelessly or slides down in bed.

- Rule of 30
- Turning
- Lifting
- Moisturizing
- Skin Protectants
- Use Lateral Transfer devices
- Involve necessary disciplines
- Proper fitting devices

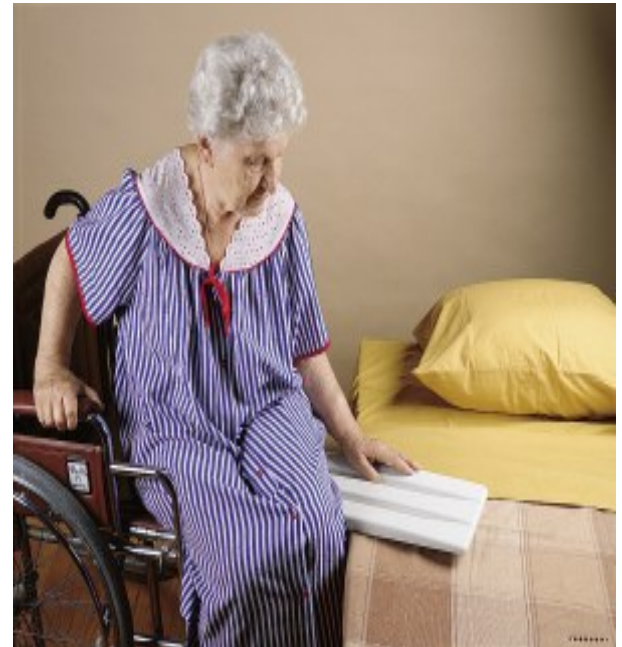
Triple threat-



Moisture

Shear/friction

Pressure



Nutrition management

- Small frequent meals
- Food choices
- Act promptly based on nutritional risks
- Vitamin supplements
- Maintain good hydration
- Dietician consult
- Evaluation for tube feedings/swallowing evaluation



Basic prevention principles



Avoid massage over bony prominences

Encourage maximum mobility

Position changes

Float heels

Protect bony prominences

Lift don't drag

Reposition in bed and chair

Pressure Injury Prevention Points

RISK ASSESSMENT

- 1 Consider bedfast and chairfast individuals to be at risk for development of pressure injury.
- 2 Use a structured risk assessment, such as the Braden Scale, to identify individuals at risk for pressure injury as soon as possible (but within 8 hours after admission).
- 3 Refine the assessment by including these additional risk factors:
 - A. Fragile skin
 - B. Existing pressure injury of any stage, including those ulcers that have healed or are closed
 - C. Impairments in blood flow to the extremities from vascular disease, diabetes or tobacco use
 - D. Pain in areas of the body exposed to pressure
- 4 Repeat the risk assessment at regular intervals and with any change in condition. Base the frequency of regular assessments on acuity levels:
 - A. Acute care Every shift
 - B. Long term care . . . Weekly for 4 weeks, then quarterly
 - C. Home care At every nurse visit
- 5 Develop a plan of care based on the areas of risk, rather than on the total risk assessment score. For example, if the risk stems from immobility, address turning, repositioning, and the support surface. If the risk is from malnutrition, address those problems.

SKIN CARE

- 1 Inspect all of the skin upon admission as soon as possible (but within 8 hours).
- 2 Inspect the skin at least daily for signs of pressure injury, especially nonblanchable erythema.
- 3 Assess pressure points, such as the sacrum, coccyx, buttocks, heels, ischium, trochanters, elbows and beneath medical devices.
- 4 When inspecting darkly pigmented skin, look for changes in skin tone, skin temperature and tissue consistency compared to adjacent skin. Moistening the skin assists in identifying changes in color.
- 5 Cleanse the skin promptly after episodes of incontinence.
- 6 Use skin cleansers that are pH balanced for the skin.
- 7 Use skin moisturizers daily on dry skin.
- 8 Avoid positioning an individual on an area of erythema or pressure injury.

NUTRITION

- 1 Consider hospitalized individuals to be at risk for under nutrition and malnutrition from their illness or being NPO for diagnostic testing.
- 2 Use a valid and reliable screening tool to determine risk of malnutrition, such as the Mini Nutritional Assessment.
- 3 Refer all individuals at risk for pressure injury from malnutrition to a registered dietitian/nutritionist.



**NATIONAL
PRESSURE
ULCER
ADVISORY
PANEL**

©2016 National
Pressure Ulcer
Advisory Panel
(April 2016)
www.npuap.org



-skin /pressure ulcer risk assessment

- -support surface
- shear reduction- lifting/drawsheets/trapeze



-keep turning/moving

- keep heels off bed
- keep head of bed at lowest possible height (30* or less) as medically and physiologically appropriate



-integumentary assessment

- incontinence/moisture management
- include other disciplines
- inspect under devices daily - remove stockings and supportive devices daily as medically and physiologically appropriate
- inform patient and caregiver of risk and prevention strategies



-no donuts, blue plastic pads under patients or massage over bony prominences

- nutrition consult ordered
- nutritional supplements per recommendations

Pressure Injury

is localized damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device

- Inverse relationship between time & pressure
- Muscle more sensitive to pressure than skin
- “Bottom up”; injury begins at bone-muscle interface





*Even Superman
could not win a battle against
PRESSURE INJURY*



Every wound tells a story

Are you listening????



6/28/2016



Sarah Beth Rogers, RN, CWCN

QUESTIONS???

Recognize principles of healthy skin care management

Identify 4 or more interventions which reduce the risk of pressure injury based on evidence based skin risk assessments

Discuss 4 or more components of a comprehensive skin/wound assessment.



Acute vs. Chronic Wounds



Acute wounds

- caused by external trauma
- heal within a predictable time frame
- progress through a series of predictable phases

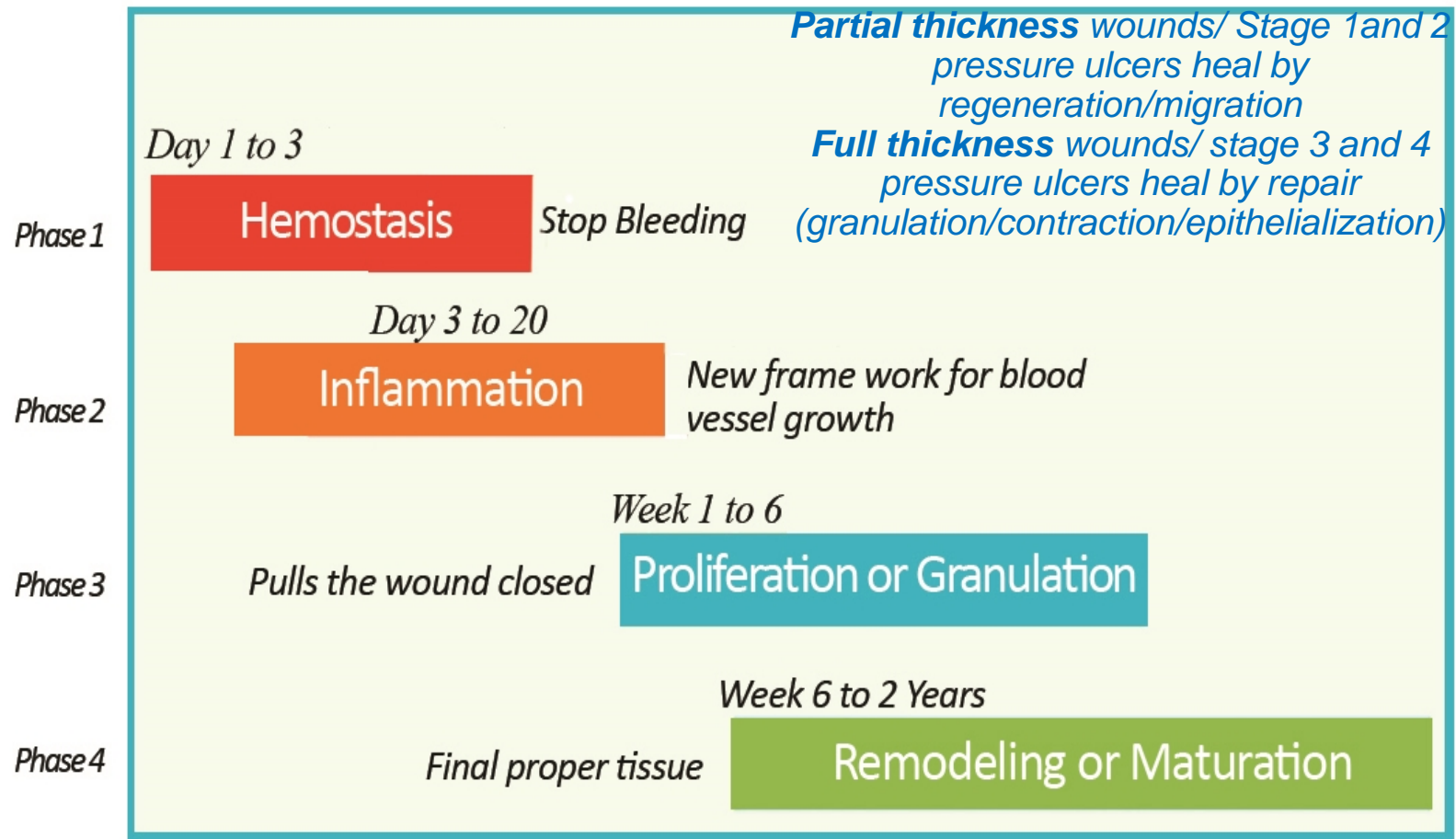
Acute vs. Chronic Wounds



Chronic wounds

- caused by a variety of underlying situations
- do not heal within a timely, orderly, or predictable time frame
- stuck in the inflammatory healing stage

4 Phases of wound healing



Acute wounds become chronic



- Pressure
- Friction/Shear
- Mobility
- Movement
- Location
- Moisture
- Desiccation
- Age
- Trauma



- Nutritional status
- Tissue perfusion
- Infection
- Co-morbid diseases
- Pharmacology
- Immunosuppression

General wound healing principles



- Optimize the host
- Evaluate for internal /external barriers to healing
- Promote perfusion and oxygenation
- Focus on glycemic control (hgb A1C)
- Infection control – prevent cross contamination
- Focus on nutritional needs- MVI/protein and calories---oral/dental health
- Manage pain and psychological factors
- Smoking cessation

Components of Wound Assessment

- Wound location
- Wound type
- Wound measurement
- Wound tissue color and percentage
- Wound drainage, amount and type
- Odor
- Surrounding skin / wound edge
- Dressing(s) used and frequency
- Pain level
- ***Etiology ????????????***



Location, Location, Location

The location of wound may provide clues to determine wound origin



Location		Possible etiology
Bony prominences	→	Pressure ulcers
Arms/Shins	→	Skin Tears
Lower Extremities	→	Below the Knee
Along toes/foot or malleolus, toe tops	→	Arterial
Between knee and ankle	→	Venous
Plantar foot	→	Diabetic
Heel	→	Pressure Ulcer



Wound Tissue Descriptors

- **Partial Thickness**

- Involve the epidermis and dermis



- **Full Thickness**

- Extend into subcutaneous tissue and/or muscle or other structures



ONLY PRESSURE INJURY SHOULD BE STAGED,
MOST OTHER WOUNDS SHOULD BE DESCRIBED AS PARTIAL OR FULL THICKNESS

Tissue Types- Percentages Red, Yellow or Black

Epithelial Tissue (Pink)- regenerated epidermal tissue migrating across the wound surface

Granulation Tissue (Red) grainy beefy red tissue with fresh blood vessels and connective tissue



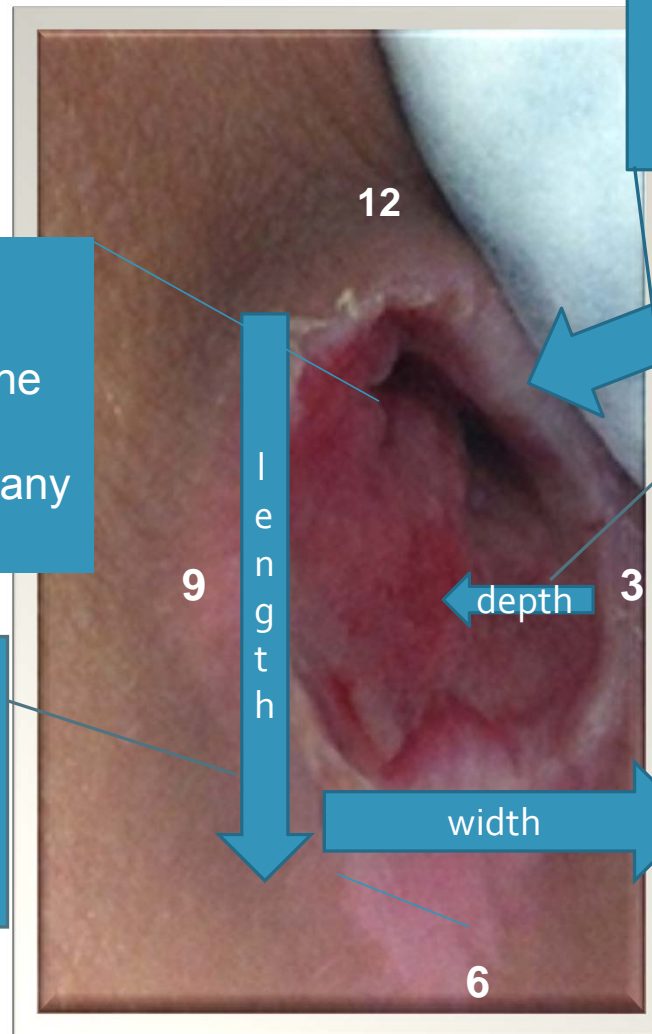
Slough- (Yellow) – devitalized tissue that is yellow/tan. Can be stringy and fibrinous-debridement needed

Eschar (Black) – devitalized tissue, generally black & leathery. Do not debride if on the heel unless s/s infection

Wound Measurement

Tunnel - A narrow opening or passageway into the base of the wound that can extend in any direction.

Length – measure from head to toe at longest place using North to South Axis



Undermining – a gap between the edge of the wound and wound base. Undermining has a roof.

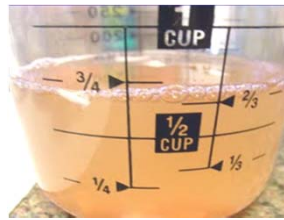
Depth – wounds with depth should be measured using a cotton tipped applicator

Width – measure from arm to arm at longest place using East to West axis

Wound Drainage/Exudate

Note wound odor after wound cleansing

Serous – clear to straw colored watery plasma



Sanguineous - bloody



Serosanguineous- blood combined with plasma



Purulent- thick opaque fluid with white blood cells and bacteria- may be white, yellow, green or tan

Wound edge



**Rolled edge/
Epibole**

Regular shape



Flattened edge



**Irregular Shape
and edges**

Surrounding Skin Descriptors



Maceration –
softened by
excess contact
with moisture



Cellulitic –
tissue is
erythematous
and warm to the
touch



Denuded –
epithelial
tissue
stripping

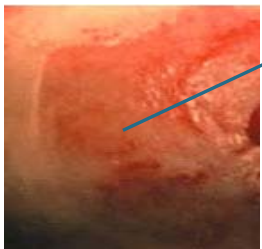
Surrounding Skin Descriptors



Hyperpigmented – discoloration of the skin that does not blanch . May describe scar tissue.



Mottled – blood vessel changes resulting in patchy appearance



Weepy – skin that is moist, usually with serous fluid



Indurated – abnormally firm area

Surrounding Skin Descriptors



Ecchymotic –
discoloration caused by
blood seeping into skin
usually due o trauma



Callus- thickened skin
due to chronic rubbing,
pressure/irritation



Scaly –
excessively dry
skin

Wound Pain Management

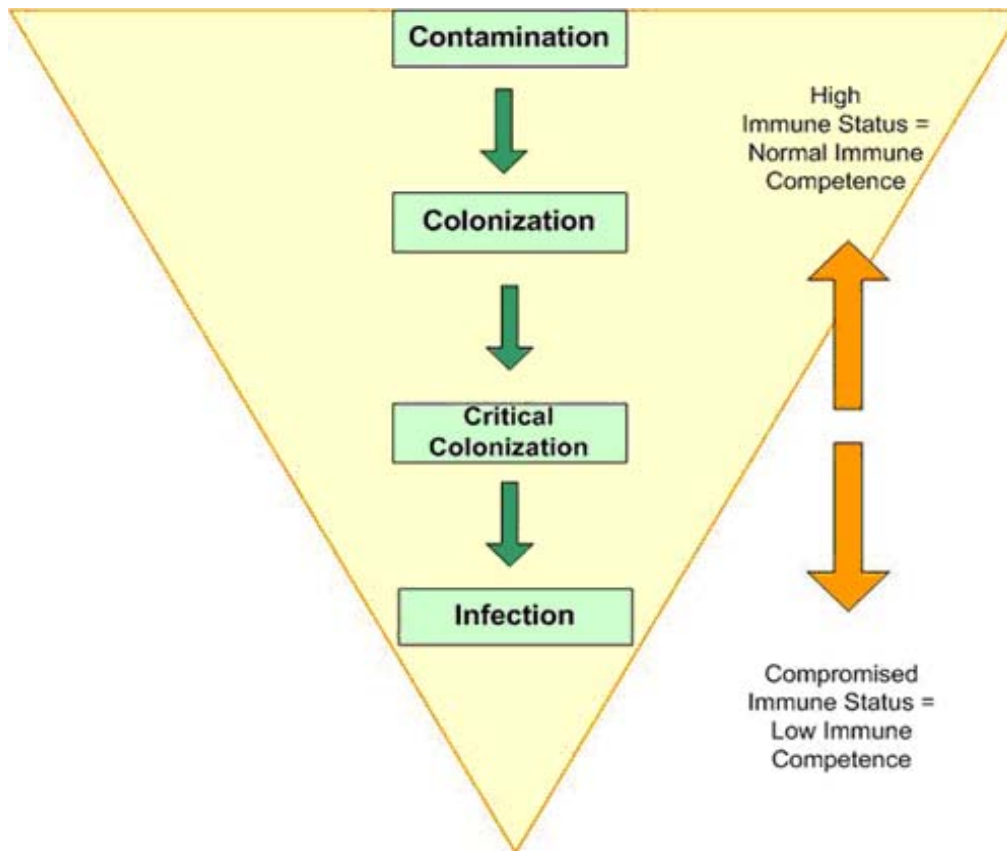


- Dressing removal (many patients say this is most painful aspect)
- Wound cleansing
- Inappropriate dressing selection or application
- Desiccation of wound surface/edges
- Imprinting from previous experiences

- Pre-medicate as ordered
- Request order & apply topical anesthetic as ordered
- Soak existing dressings with saline prior to removal
- Apply moist wound care principles and products
- Use diversional tactics as appropriate
- Describe procedures to patient to alleviate anxiety



Wound infection



- Infection = bacteria dose x virulence / host resistance
- All chronic wounds are contaminated
- Nonviable tissue will harbor bacteria
- Know your patient's risk for infection- diabetes, immunocompromised, chronic wound location and duration

Signs of Infection - Local

- Wound deterioration – additional breakdown including tunneling and undermining
- Increased drainage
- Purulent exudate
- Abnormal odor
- Heat gradient
- Erythema
- Increased pain
- Edema
- Induration
- Nonhealing wound



Culture the cleanest tissue area- nonviable tissue cultures are always positive and do not reflect what is happening at the tissue. Swab cultures yield little reliable information except MDRO's.

Signs of Infection - Systemic



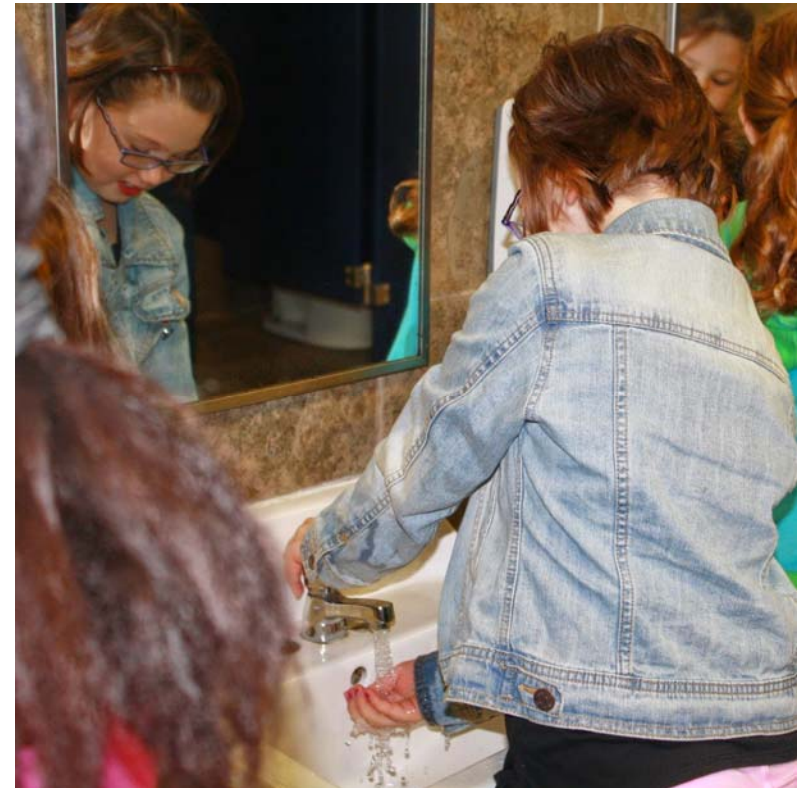
*Topical care is not the answer here.
Debridement and IVAB likely forthcoming.*

- Fever
- Elevated WBC count
- Hyperglycemia in diabetics
- Confusion
- Malaise
- Aggregate of local s/s infection

What is good hand hygiene?

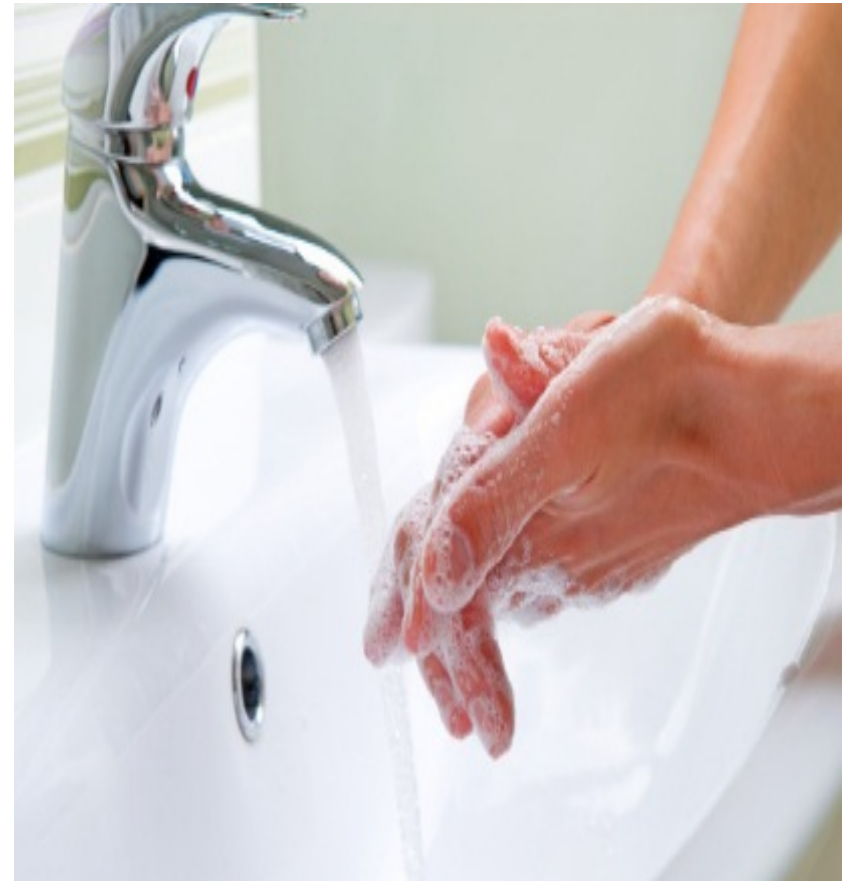
Wash your hands for at least 20 seconds (or two verses of the “Happy Birthday” song) with soap and water:

- After using the toilet or helping someone use the toilet.
- After touching dirty surfaces and handling soiled laundry.
- After handling items soiled by body fluids.
- Before and after preparing meals/snacks.
- Before eating meals.
- Before and after taking or giving medications.
- After caring for a sick person.
- After touching pets.
- After sneezing, coughing, or blowing your nose.
- Any time hands are visibly dirty.



MRSA and infection control

- Clean hands with an antimicrobial soap or alcohol-based hand rub before and after each patient, even if gloves have been worn.
- Wear gloves when examining infected areas and appropriately dispose of gloves after use.
- Properly dispose of all dressings contaminated with drainage from the infected site.
- Clean surfaces and equipment in the exam or hospital room that may have been contaminated by the patient with a commercial disinfectant or with a 1:100 bleach and water solution.
 - Launder all linens that come into contact with drainage or secretions from the infected site in hot water and dry with a high dryer setting as the heat will help to kill any bacteria still present after the wash.
 - Don't share towels or clothing
 - **Keep wound covered with clean, dry bandage**
 - **Clean hands after changing bandage**



C.Diff

- How can I prevent spreading *C. diff* (and other germs) to others at home?
- Wash your hands often with soap and water, especially after using the bathroom, before preparing food and before eating.
- For drying your hands, use cloth towels only once, or use disposable towels.
- Wear disposable gloves if you expect to come into contact with stool, urine and wound drainage. Wash your hands after removing gloves.
- Frequently clean areas of your home, such as your bathroom, that may become contaminated with *C. diff*.
- Change and wash linens on a regular basis, or any time they are soiled.

If you are given a prescription to treat *C. diff*, take the medicine exactly as prescribed by your doctor and pharmacist. Do not take half-doses or stop before you run out.



WASH YOUR HANDS

ALCOHOL BASED HAND SANTITIZERS ARE INEFFECTIVE



Brenda Hensley RN, MSN, CWOCN

QUESTIONS???

Discuss 4 or more components of a comprehensive skin/wound assessment.

Differentiate 3 or more interventions and associated wound characteristics that support wound healing.

Pressure INJURY



- is localized damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device
- can present as intact skin or an open ulcer and may be painful
- occurs as a result of intense and/or prolonged pressure or pressure in combination with shear
- the tolerance of soft tissue for pressure and shear may also be affected by
 - microclimate,
 - nutrition,
 - perfusion,
 - comorbidities and
 - condition of the soft tissue.



Pressure Injury



Stage 1



Stage 2



Stage 3



Stage 4



Unstageable



Deep Tissue Injury

Stage 1 Pressure Injury

- Non-blanchable erythema of intact skin
- Intact skin with a localized area of non-blanchable erythema, which may appear differently in darkly pigmented skin.
- Presence of blanchable erythema or changes in sensation, temperature, or firmness may precede visual changes.
- Color changes do not include purple or maroon discoloration; these may indicate deep tissue pressure injury.



Stage 2 Pressure Injury

Partial-thickness loss of skin

- Partial-thickness loss of skin with exposed dermis.
- The wound bed is viable, pink or red, moist, and may also present as an intact or ruptured serum-filled blister.
- Adipose (fat) is not visible and deeper tissues are not visible
- Granulation tissue, slough and eschar are not present.
- These injuries commonly result from adverse microclimate and shear in the skin over the pelvis and shear in the heel.
- **This stage should not be used to describe moisture associated skin damage (MASD) including incontinence associated dermatitis (IAD), intertriginous dermatitis (ITD), medical adhesive related skin injury (MARSI), or traumatic wounds (skin tears, burns, abrasions).**



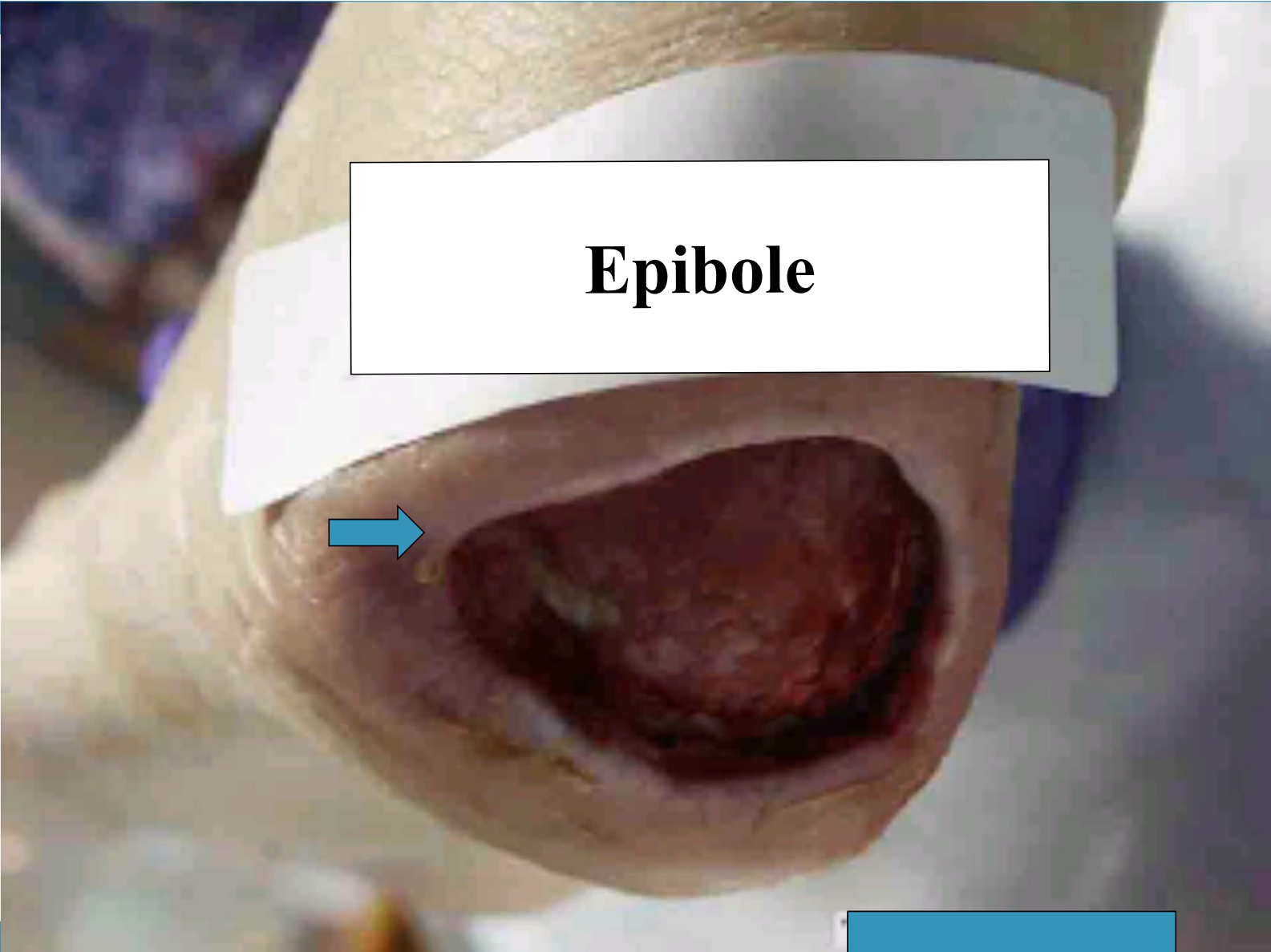
Stage 3 Pressure Injury

Full-thickness skin loss

- Full-thickness loss of skin, in which adipose (fat) is visible in the ulcer and granulation tissue and **epibole** (rolled wound edges) are often present.
- Slough and/or eschar may be visible.
- The depth of tissue damage varies by anatomical location; areas of significant adiposity can develop deep wounds.
- Undermining and tunneling may occur.
- Fascia, muscle, tendon, ligament, cartilage and/or bone are not exposed. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.



Epibole



Stage 4 Pressure Injury: Full-thickness skin and tissue loss

- Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage or bone in the ulcer.
- Slough and/or eschar may be visible.
- Epibole (rolled edges), undermining and/or tunneling often occur.
- Depth varies by anatomical location. If slough or eschar obscures the extent of tissue loss this is an Unstageable Pressure Injury.



Unstageable Pressure Injury: Obscured full-thickness skin and tissue loss

- Full-thickness skin and tissue loss in which the extent of tissue damage within the ulcer cannot be confirmed because it is obscured by slough or eschar.
- If slough or eschar is removed, a Stage 3 or Stage 4 pressure injury will be revealed. Stable eschar (i.e. dry, adherent, intact without erythema or fluctuance) on an ischemic limb or the heel(s) should not be removed.



Deep Tissue Pressure Injury:

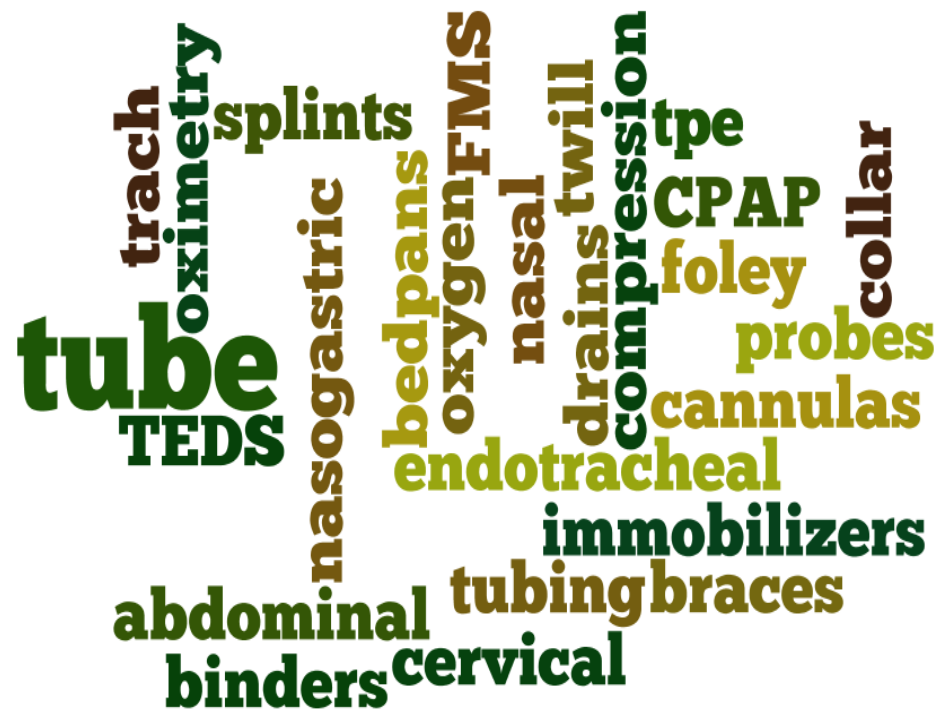
Persistent non-blanchable deep red, maroon or purple discoloration

- Intact or non-intact skin with localized area of persistent non-blanchable deep red, maroon, purple discoloration or epidermal separation revealing a dark wound bed or blood filled blister.
- Pain and temperature change often precede skin color changes.
- Discoloration may appear differently in darkly pigmented skin.
- This injury results from intense and/or prolonged pressure and shear forces at the bone-muscle interface.
- The wound may evolve rapidly to reveal the actual extent of tissue injury, or may resolve without tissue loss.
- If necrotic tissue, subcutaneous tissue, granulation tissue, fascia, muscle or other underlying structures are visible, this indicates a full thickness pressure injury (Unstageable, Stage 3 or Stage 4).
- Do not use DTPI to describe vascular, traumatic, neuropathic, or dermatologic conditions.



Medical Device Related Pressure Injury

- describes the **etiology** of the injury
- result from the use of devices designed and applied for diagnostic or therapeutic purposes
- the resultant pressure injury generally conforms to the pattern or shape of the device
- the injury should be staged using the staging system.



Mucosal Membrane Pressure Injury

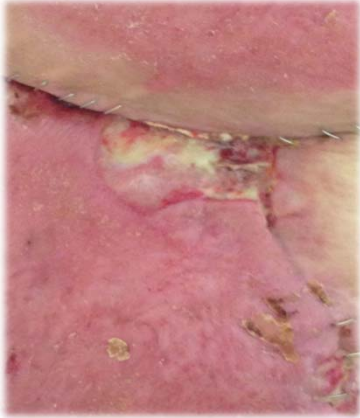
- is found on mucous membranes with a history of a medical device in use at the location of the injury
- due to the anatomy of the tissue these injuries **cannot be staged**



**Not all
wounds are
pressure
injury**



Is it a pressure ulcer or moisture associated skin damage?



Moisture-Associated Skin Damage

From Prolonged Exposure to Urinary and Fecal Incontinence

Incontinence-Associated Dermatitis

From Prolonged Exposure to Perspiration in Skin Folds

Intertiginous Dermatitis

From Prolonged Exposure to Wound Exudate

Periwound Moisture-Associated Dermatitis

From Prolonged Exposure To Effluent from an Ostomy

Peristomal Moisture-Associated Dermatitis

Characteristics of moisture associated skin injury

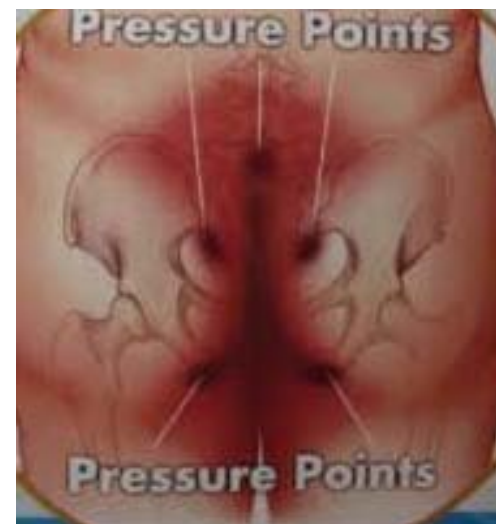
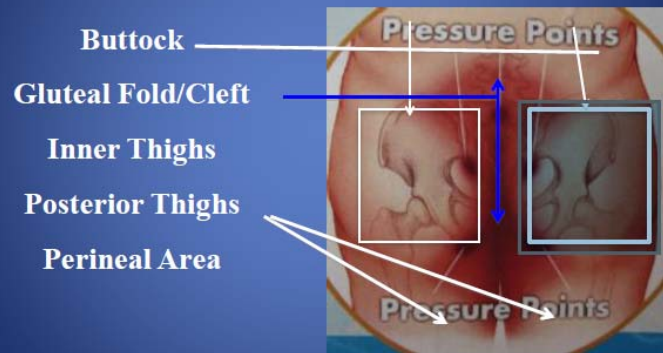
- Called moisture lesion, moisture ulcer, perineal dermatitis,diaper dermatitis, incontinence associated dermatitis
- Diffuse erythema and edema of upper dermal skin surface,
- may include bullae with serous exudate, erosion, or secondary cutaneous infection (Gray et al., 2012)
- Often mistaken as Stage II PU (Top Down vs Bottom Up)
- Enzymes breakdown & destroy intercellular “cement”,
- disrupting stratum corneum; ↑pH
- Skin damage resulting from excess moisture + chemical
- composition of the moisture
- Skin protective barrier compromised, allows “enzyme attack”
- Incontinence

(Wishin et al., 2008)



Wound type	Location	Depth	Characteristics	Exposure
Pressure ulcer	Over bony prominence Under medical device	Full-thickness* (extension to subcu, muscle, bone) May initially present as suspected deep tissue injury	Undermining and tunneling common Slough and eschar common	Pressure and/or shear
Incontinence-associated dermatitis	Perineal and perianal areas Inner thighs	Superficial/partial thickness	Maceration of surrounding skin common	Stool and/or urine

Location, Location, Location



Skin first layer of defense

- **Fecal incontinence**
 - alone can increase risk of moisture associated injury 22x
 - Stool contains enzymes- caustic- if decreased bowel transit time increase skin damage

- **Urinary Incontinence**

- Contains urea
- Changes to ammonia

Hyper hydration ->increase in pH of skin (nl pH ~5.5 which creates hostile environment to bacteria/fungal growth) acid mantle ->decrease barrier function



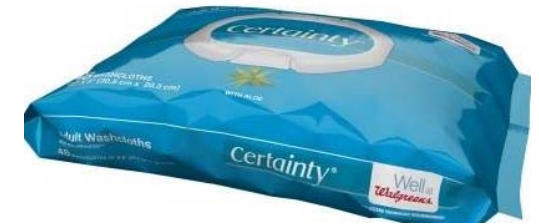
Incontinence skin care

Clean when soiled

Use barriers

Minimize diapering

Use pH balanced skin care products



Incontinence skin care

Toileting strategies

Dietary management- fluids and fiber

Pharmaceutical

Pelvic floor exercises

R/o infections and other physiologic reasons for incontinence





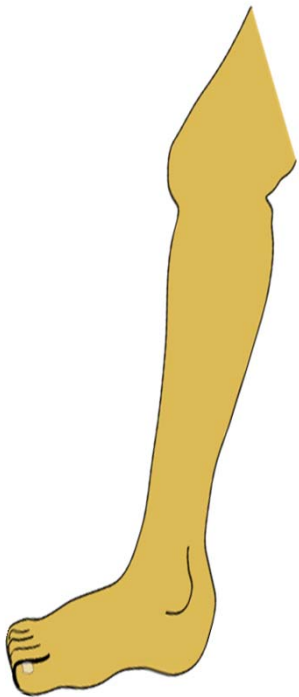
Skin Tears



- Can involve more than the dermis-partial or full thickness
- With or without a flap
- Upper and lower extremities
- Frail elderly with limited ADL ability, gait disturbance
- Prednisone, Coumadin

Lower extremity ulcers

- Venous stasis ulcers
- Arterial ulcers
- Diabetic ulcers
- Neuropathic ulcers



- **15%** will develop a diabetic foot ulcer and 50% of these will become infected, representing an estimated **2 million** patients
- **60,000** amputations annually

Quick Assessment of Leg Ulcers

	VENOUS INSUFFICIENCY (STASIS)	ARTERIAL INSUFFICIENCY	PERIPHERAL NEUROPATHY (DIABETIC)
Location	<ul style="list-style-type: none"> Malleolus Medial aspect of leg superior to medial malleolus 	<ul style="list-style-type: none"> Areas exposed to pressure or repetitive trauma, or rubbing of footwear Lateral malleolus Mid tibial Phalangeal heads Toe tips or web spaces 	<ul style="list-style-type: none"> Altered pressure points/sites of painless trauma/repetitive stress Dorsal and distal toes Heels Inter-digital Metatarsal heads Mid-foot (dorsal and plantar) Toe interphalangeal joints
Wound	<ul style="list-style-type: none"> Base: ruddy red; yellow adherent or loose slough; granulation tissue present, undermining or tunneling are uncommon Depth: usually shallow Margins: irregular Exudate: moderate to heavy Infection: less common 	<ul style="list-style-type: none"> Base: pale; granulation rarely present; necrosis, eschar, gangrene may be present Depth: may be deep Margins: edges rolled, punched out, smooth and undermining Exudate: minimal Infection: frequent; signs may be subtle 	<ul style="list-style-type: none"> Base: pink/pale; necrotic tissue variable Depth: variable Edges well defined Exudate: small to moderate Wound shape: usually rounded or oblong and found over bony prominence
Surrounding Skin	<ul style="list-style-type: none"> Venous dermatitis – erythema, weeping, scaling, crusting Hemosiderosis – brown staining Lipodermatosclerosis; Atrophy Blanche Temperature: normal to warm Edema: pitting or non, possible induration and cellulitis Scarring from previous ulcers, ankle flare, tinea pedis Infection: Induration, cellulitis, inflamed, tender bulla 	<ul style="list-style-type: none"> Pallor on elevation Dependent rubor Shiny, taut, thin, dry Hair loss over lower extremities Atrophy of subcutaneous tissue Edema: variable; atypical Temperature: decreased/cold Infection: Cellulitis Necrosis, eschar, gangrene may be present 	<ul style="list-style-type: none"> Normal skin tones Trophic changes Fissuring or callus formation Edema: with erythema may indicate high pressure Temperature: warm





Venous

- Improve venous return-compression
- Optimize local wound environment
- Bioburden and exudate management
- Disease management
- Lifestyle changes





Arterial: Do no harm!!!



- Improve perfusion
- Optimize local wound environment
- Reduce or eliminate contributing factors
- Assess for infection
- Disease management
- Vascular care

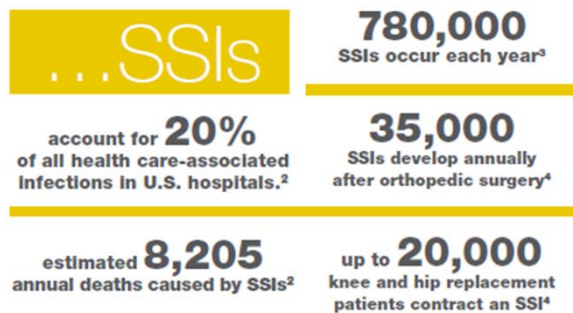


Diabetic foot ulcers /neuropathic

- Debridement
- Off-loading
- Local wound care
- Patient education
- Disease management and adjunctive therapies
- Podiatric/vascular care

Surgical wounds

- Primary Closure/Intention
- Secondary Closure/Intention
- Delayed Primary Closure/Tertiary Intention



<http://mkt.medline.com/clinicalblog/files/2013/12/SSIsstatistics.png>

Atypical wounds

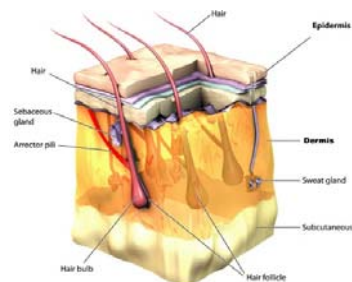
Consider a wound atypical if it has not responded to appropriate wound care management in **3-6 months** providing systemic support is optimized.

Consider *dermatology, infectious disease, tissue biopsy, underlying systemic disease* with nonhealing wounds



In summary: A wound is not “just a wound.”

- Today we've reviewed skin anatomy, wound assessment, pressure ulcer prevention, and how to differentiate various types of wounds.
- During our next presentation on June 30, we'll address dressings and wound treatments, support surfaces, and community resources.
- Now we'd like to hear comments and questions from the audience.



Nursing process continues in WEBINAR 2 next week

- Comprehensive wound assessments allow for management by etiology and wound characteristics
- Drives the plan of care
 - Optimize the host
 - Address modifiable factors
 - Wound bed preparation
 - Product selection
 - Intraprofessional involvement



Select References

- Chambers, H. G., & Chambers, J. A. (2015). Effects of Caregiving on the Families of Children and Adults with Disabilities. *Physical medicine and rehabilitation clinics of North America*, 26(1), 1-19.
- Department of Disabled Adults. Viewed 05/01/2016 from http://dda.dhmh.maryland.gov/Pages/health_and_nursing.aspx
- Doughty, D., & McNichol, L. (2015). *Wound, Ostomy and Continence Nurses Society® Core Curriculum: Wound Management*. Lippincott Williams & Wilkins.
- Hopf, HW. Wound Repair and Regeneration. Official publication of the Wound Healing Society [and] the European Tissue Repair Society. 2006;14(1):55-60
- NPUAP, (2016). Pressure Injury Staging. Retrieved 04/13/16 from <http://www.npuap.org/national-pressure-ulcer-advisory-panel-npuap-announces-a-change-in-terminology-from-pressure-ulcer-to-pressure-injury-and-updates-the-stages-of-pressure-injury/>
- NPUAP, (2016). Pressure Injury Prevention Points, Retrieved 05/01/2016 from <http://www.npuap.org/national-pressure-ulcer-advisory-panel-npuap-announces-a-change-in-terminology-from-pressure-ulcer-to-pressure-injury-and-updates-the-stages-of-pressure-injury/>

**YOUR QUESTIONS
&
COMMENTS?**





Thank You!