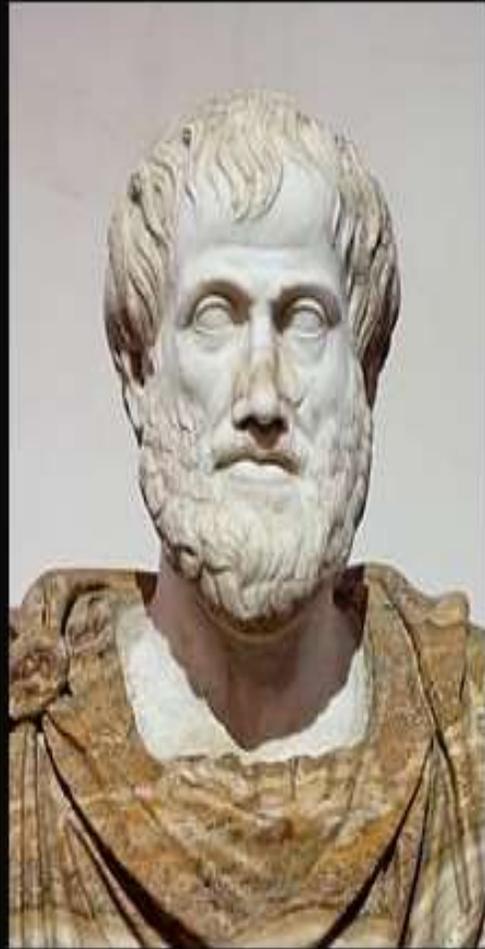


The Pressure's on! Clinical and Legal Elements of Pressure Injuries



SANDRA HIGELIN
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"I have no financial relationships to discuss, and I will not discuss off label use and/or investigational use in my presentation"



Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but we rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit.

(Aristotle)

izquotes.com

Case Study

Patient admitted to Skilled Nursing Facility hospitalization for a massive stroke.

Multiple co-morbidities including severe PVD, DM and significant impaired mobility

**On admission: no skin breakdown.

**High Risk for skin breakdown

**Care plan was developed

**Podus Boots ordered to prevent heel injuries/foot drop

****1st week: daily skin assessments: No Breakdown**

****2nd week-Skin assessments: abrasions bilateral lower extremities**

****Wound consult ordered**

****Daily skin assessments continue: skin intact or abrasions**

****4th week: Wound consultant evaluates patient for the first time**

What Do You Think She Found??

22 areas of severe skin breakdown on bilateral lower extremities



Pressure Injuries



Pain
Depression
Disfigurement
Infection
Loss of limb
Loss of life



Human Cost



Cost of Pressure Injuries

- Pressure ulcers cost the health system \$26.8 billion a year
- The [Centers for Disease Control](#) and Prevention estimates that 2 million patients suffer from hospital-acquired infections every year and nearly 100,000 of them die. Hospital-acquired infections [result](#) in up to \$4.5 billion in additional healthcare expenses annually.

▶ Litigation compensation: in excess of \$312 million

▶ Financial viability

▶ Loss of Reputation

▶ Public Scrutiny



Financial Burden

Objectives

Participants will be able to

- 1. Discuss EB Practice Guidelines, Policies & Procedures, Regulations, Standards of Care**
- 2. Discuss the provision of care: nursing process, documentation, risk management, and litigation**
- 3. Describe the litigation process and legal prevention strategies**
- 4. Illustrate through active participation appropriate practices necessary to improve provision of patient care and legal prevention practices.**

Implicit Bias Statement

Defaulting to stereotypes about your patients may lead to a lack of trust and poor health outcomes. It is very important to treat each patient as a unique individual who may or may not hold beliefs associated with their backgrounds and circumstances. In addition to treating each patient as a unique individual, the nurse or healthcare provider must strive to be aware of their own biases and endeavor not to let them influence the quality of care they provide.

-American Nurses Association (ANA), 2021



*If he has a bedsore, it's generally not the fault of the disease, but of the nursing."
Florence Nightingale (1859)*

CMS Classification of PI

Avoidable:

The resident develops a pressure injury and that the facility did not do one or more of the following:

1. Evaluate the clinical condition
2. Evaluate the risk factors
3. Define and implement interventions
4. Monitor/Evaluate/Revise POC

Unavoidable:

The resident developed a pressure injury even though the provider had evaluated the clinical conditions, the risk factors, and defined, implemented, monitored, evaluated, and revised the plan of care.

8 Elements of Pressure Injury (PI) Prevention & Management Imperative to Providing Appropriate Standard of Care, Risk Management, Regulatory Compliance for:

- Patient Safety
- Patient Centered Care
- Improved pt. outcomes
- Cost effective
- Legal Preventive Care

8 Elements of PI Prevention/Management

#1 Comprehensive Assessment

- Assess Pressure Injury Risk
- Assess Skin for lesions
- Assess Nutrition
- Co-morbidities
- Photograph PI per P&P



Braden Risk Assessment Scale

(abridged version)

Sensory Perception	1 Completely limited	2 Very limited	3 Slightly limited	4 No impairment
Moisture	1 Constantly moist	2 Very moist	3 Occasionally moist	4 No impairment
Activity	1 Bedfast	2 Chairfast	3 Walks Occasionally	4 Walks frequently
Mobility	1 Completely immobile	2 Very limited	3 Slightly limited	4 No limitation
Nutrition	1 Very poor	2 Probably inadequate	3 Adequate	4 Excellent
Friction & Shear	1 Problem	2 Potential problem	3 No apparent problem	

Skin Integrity Management/ Skin-The 6th Vital Sign – Skin Assessment



- Skin is the largest organ
- Skin integrity should be assessed on & during admission in as rigorous a fashion as the other vital signs

#2 Care Plan

Potential for Impaired Skin Integrity

- ▶ Intervention: skin care, barrier ointments, incontinence care, pressure redistribution systems for bed and chair, repositioning, avoid friction and shear, pt./family/CG edu.
- ▶ Evaluation: daily/weekly evaluations of progress, pictures, measurements & change in treatment plan if PI develops

Assessment Tools



Prevention/Management

What Support Surface?

- Alternating Pressure
- Low Air Loss
- Air Fluidized
- Bariatric
- Gels, Foams
- Seat Cushions



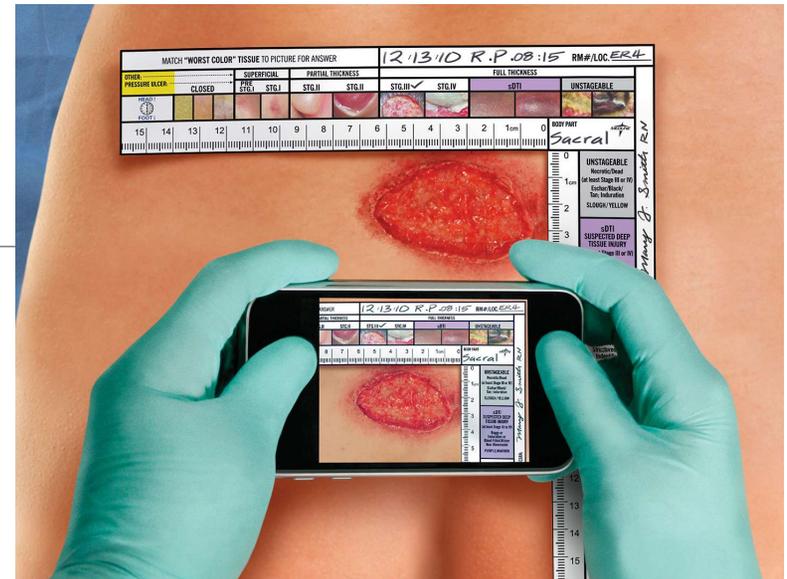
Wound Dressings



- Hydrocolloids (Duoderm, Comfeel)
- Hydrogels (wound res, Saf-gel, Carradres)
- Anti-microbials (Silvadene, Iodosorb, Iodoflex, Silver products)
- Calcium Alginates/hydrofiber (Aquacel)
(Seasorb, Sorbsan, Kalostat)
- Petroleum impregnated gauze (xeroform, adaptic)
- Enzymatic debriding ointment (Santyl)

3 Wound Assessment

- ▶ What is the etiology?
- ▶ What is the stage?
- ▶ What is the location?
- ▶ Measurements: Length X Width X Depth
- ▶ Tunneling, undermining
- ▶ Is there drainage? color/amount: sanguineous, serosanguineous, serous, Purulent, foul odor
- ▶ What does it smell like?: strong, foul, musty
- ▶ What does the wound bed look like? The periwound



#4 Signs and Symptoms of Infection

- ▶ Redness, streaking
- ▶ Increased drainage
- ▶ Odor
- ▶ Warmth
- ▶ Induration
- ▶ Edema, weeping
- ▶ Fever, malaise, elevated WBC
- ▶ Pain
- ▶ Confusion



#5 Is The PI Causing Pain?

- ▶ Pain assessment: pain scale
- ▶ Constant or situational
- ▶ During dressing changes



#6 Care Plan: Impaired Skin Integrity

- Intervention: topical ointments, dressings, negative pressure wound therapy, pressure redistribution, RD consult, Wound Consultant
- Evaluation: daily/weekly evaluations of progress, pictures, measurements, descriptions
- Change in treatment plan when progress towards healing is not evident, healing is occurring, or significant deterioration of wound.

#7 Documentation of Interventions

- ▶ Risk Assessment
- ▶ Skin Assessment
- ▶ Turning and repositioning
- ▶ Treatments/medications
- ▶ Pressure Redistribution Devices i.e. Mattress, overlays, beds, cushions, heel protectors
- ▶ Nutrition assessments and interventions
- ▶ MD and Responsible Party notification
- ▶ Education of patient and caregivers

8 Doctor, IDT, Patient/Family Involvement



- ▶ MD Assessments, orders, consults, progress notes
- ▶ Notification of MD
- ▶ Discussion with patient/family about assessment findings and care plan
- ▶ Patient and family education

Just When You Think You Finally Got It

I Am
Confused



They change the terms again

Prevention and Treatment
of Pressure Ulcers/Injuries:
Clinical Practice Guideline

The International Guideline
2019

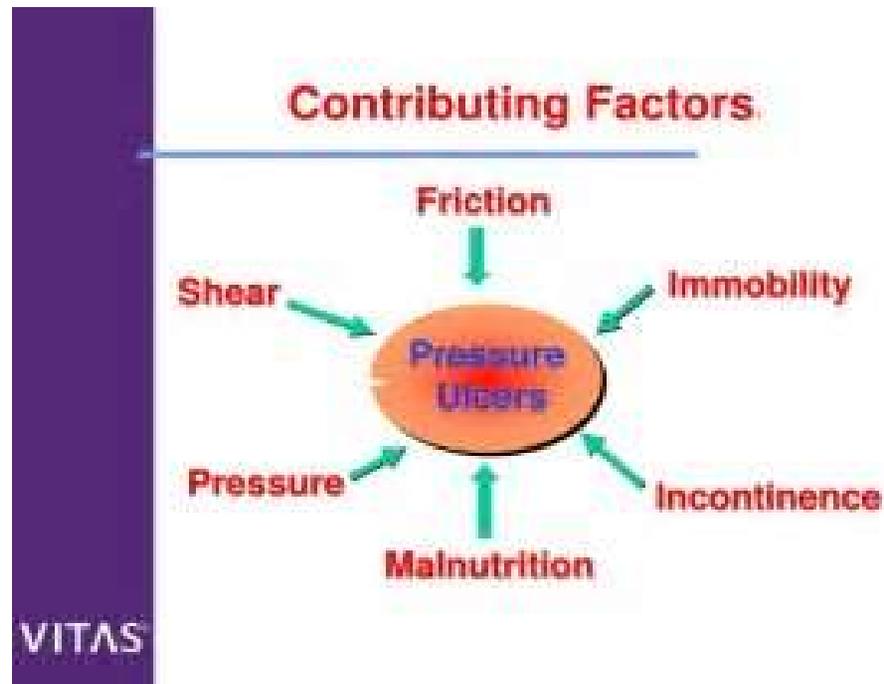


National Pressure Injury Advisory Panel (NPIAP 2019)

- A 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.
- The injury can present as intact skin or an open Injury and may be painful.

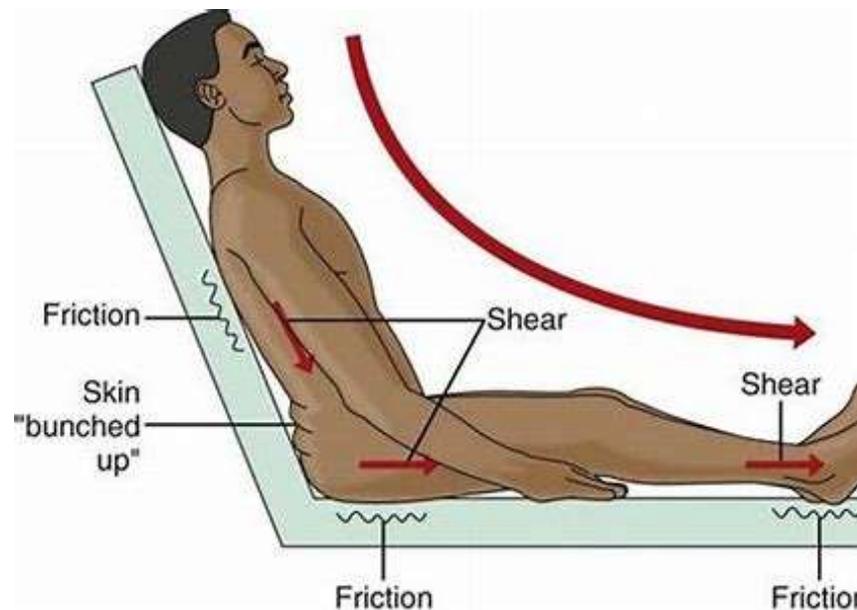
NPIAP 2019 cont.

- The injury 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



There are four mechanisms that contribute to pressure Injury development:

- External (interface) pressure applied over an area of the body,...
- Friction is damaging to the superficial blood vessels directly under the skin.
- Shearing is a separation of the skin from underlying tissues.
- Moisture is also a common pressure Injury culprit. Sweat, urine, feces,...



Pressure Injury Stages

Category/ Stage 1 Pressure Ulcer



- Intact skin with *non-blanchable redness* of a localized area usually over a bony prominence.
- Darkly pigmented skin may not have visible blanching.
- Color may differ from the surrounding area.



Blanch Response



Pale or whiteish areas on the skin as blood flow to the region is prevented by a finger or plastic disc (diascopy). ©2016 National Pressure Injury Advisory Panel | www.npiap.org

To determine blanching – Apply light pressure for a few seconds
– Release and watch for quick return to usual skin color

- Blanchable – Skin color returns immediately
- Non-blanchable erythema – The lack of a blanch response occurs when light pressure is applied or, persistent redness in lightly pigmented skin

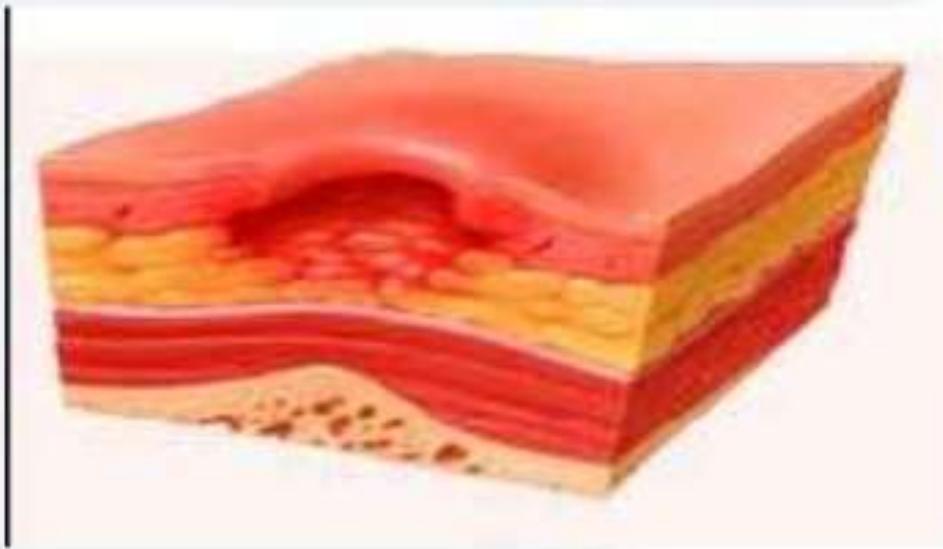
Stage 2

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).**



National Pressure Ulcer Advisory Panel Pressure Ulcer Staging Classification

- **Stage 3** – Full thickness skin loss. Fat may be visible but bone, tendon or muscle tissue are not. Slough may be present.



Stage 4

Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage or bone in the Injury. 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.



It is what you can't see that can get you.



THE BASEMENT

I'll give you a dollar if you go first.

Unstageable Pressure Injury

Full-thickness skin and tissue loss in which the extent of tissue damage within the Injury 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.

- Unable to determine depth
- Stable dry, adherent, intact without erythema or fluctuance on an ischemic limb or heel. Should not be softened or removed



Deep Tissue Pressure Injury (DTPI)

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.



Word of Caution:
Discoloration may appear differently in darkly pigmented skin. This can cause a delay in discovery at time of skin assessment.

DTPI cont.

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

Deep Tissue Pressure Injury

Pain and temperature change often precede skin color changes. 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.

Evolution of Deep Tissue Pressure Injury

Day 1 - DTPI



Day 3 - DTPI



Day 10 - Unstageable



- **Day 1** - Classify intact, discolored skin this pressure as a Deep Tissue Pressure Injury
- **Day 3** - Classify discolored skin with epidermal blistering as a Deep Tissue Pressure Injury
- **Day 10** - If the Deep Tissue Pressure Injury becomes necrotic, classify it as an Unstageable Pressure Injury

Overlooked Pressure Injuries



Medical Device Related Pressure Injury:

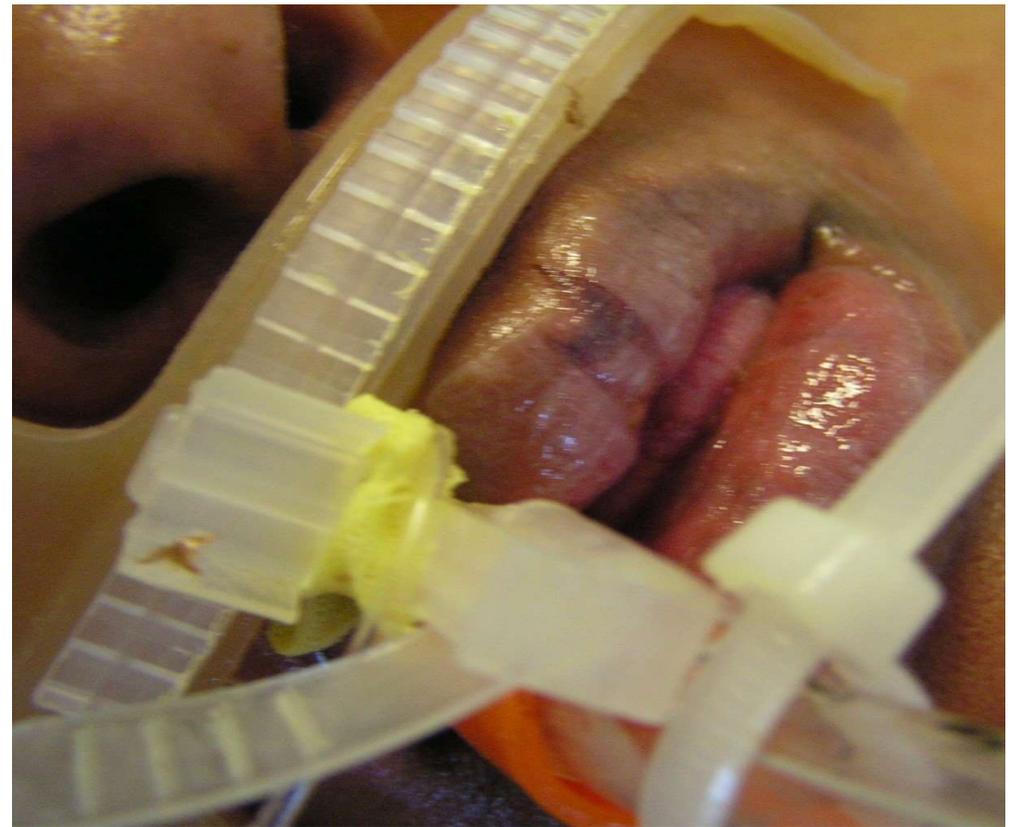
This describes an etiology. Use the staging system to stage

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:

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.



Trach Collar Pressure Injuries



Prevention – Nursing • Use thicker, wider foam collar straps to pad skin • Pad skin around stoma • Check for Injuries beneath straps on each shift • Look closely at securements in neck folds • Find ties and move them daily • Line entire neck with dressings Silver dressings reduced Injuries and peristomal skin

CPAP-BiPAP Facial Injuries



Issues – Develop quickly due to thin tissue – Visible injury –
Device applied tightly to maintain O2 sats

Prevention – Work with RT to apply dressing prior to O2 – Bundle dressings to devices – Line nasal bridge and cheeks with foam dressings before placement – Switch to total face mask before 12 hours

Etiology Of Wound



Before Staging a Pressure Injury

- Determine the cause of the injury – Is the injury from pressure or pressure in combination with shear? – Is the injury from moisture associated skin damage (incontinence associated dermatitis, intertriginous dermatitis), medical adhesive related skin injury or traumatic wounds (skin tears, burns, abrasions).
- What happened to the patient before admission, during admission; i.e.. Fall at home?
- Vasopressor use, surgical procedures



โรงพยาบาล
Phramongkol

Skin Breakdown



Peristomal Moisture-Associated Dermatitis



Skin Tear



Incontinence Associated Dermatitis



Periwound Maceration



Skin Striping/Trauma from Adhesive Dressing/Tape





NPUAP.org | Copyright © 2011 Gordian Medical, Inc. dba American Medical Technologies

Characteristic	Incontinence-Associated Dermatitis (IAD)	Pressure Ulcer (PrU)
Location	Often in skin folds Diffuse	Usually over bony prominence Well circumscribed
Color	Red or bright red	Red to bluish/purple
Depth	Intact skin to partial-thickness wound	Intact skin to partial- or full-thickness wound
Necrosis	None	May be present
Pain and itching	May be present	May be present

Are these Pressure Injuries?





What are These?



Misdiagnosis Causes Problems

A Case Study

#1



Coumadin Induced Necrosis
Wound Consultant (WOCN)
documented as Pressure Injuries

#2



**MD diagnosed
wounds as PI
**Wound Consultant
documented them
as DTI

(Levophed//Heparin/Coumadin)

Avoidable or Unavoidable?

Case Study



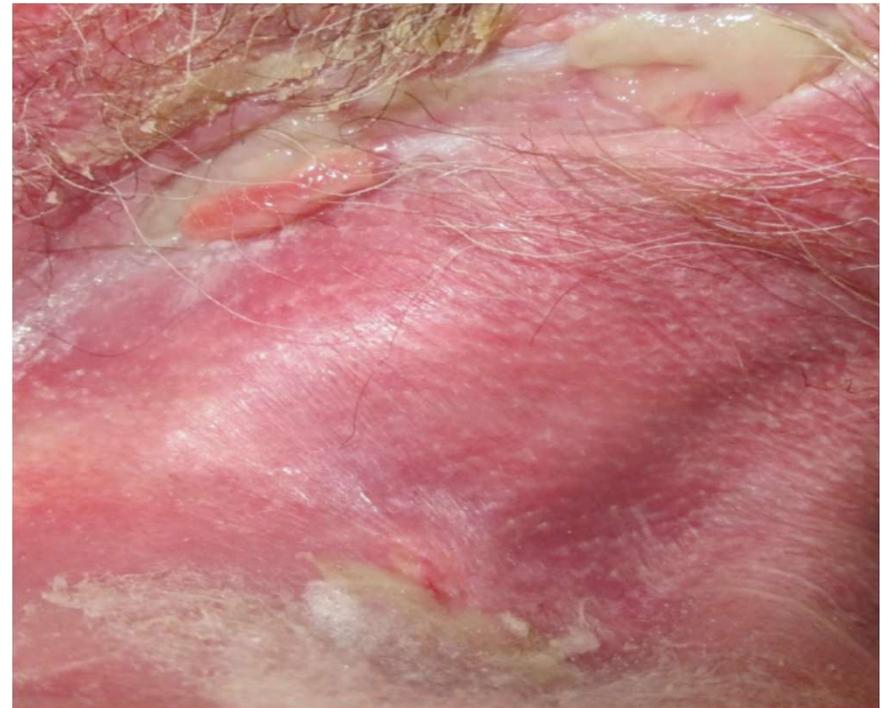
- Patient: 60 year old male with complex medical history. including Traumatic Fx of Vertebra, Fx. Vertebra Thoracic, Fx Right Femur from an automobile
- Admitting diagnosis: Spasmodic Torticollis
- Well documented in the physician progress notes all medical problems were assessed/interventions implemented/orders followed.
- Nurses' notes document continuous assessment of the patient's condition with physician and family notification. Physical and occupational therapy provided but limited D/T his Torticollis.

RD and ST consulted

- Weight 120lbs on admission.
- Appetite was poor and he had difficulty swallowing. He lost weight- 112lbs
- Albumen ranges: 1.7- 2.8, PAB 12.1
- HGB/HCT 10/ 28
- CRP 200 BUN 24 Creatinine 0.8.
- A Peg Tube was eventually placed for nutritional support.

Additional information:

- **s/p Botox injections no significant improvement
- **Other tx.: artane, baclofen, valium, lidocaine patch, neurontin, ms contin, prn oxycodone
- **Diagnostic indicated fat stranding and inflammation in R masseter with concern for malignancy
- **Biopsy performed-Negative



What are your thoughts??

- **Was there a breach in Standard of Care?**
- **Was this Pressure Injury unavoidable?**
- **Was this a Pressure Injury?**
- **Does Florence Nightingale's belief hold true today?**

Words Have Meaning

- Misdiagnosis of PI's/other wounds
 - ** Inappropriate interventions
 - ** Delay in appropriate management
 - ** Regulatory Issues
 - ** Litigation Implications
- Misrepresentation: Not calling it a PI when that is what it is.
- Etiology of the skin lesion

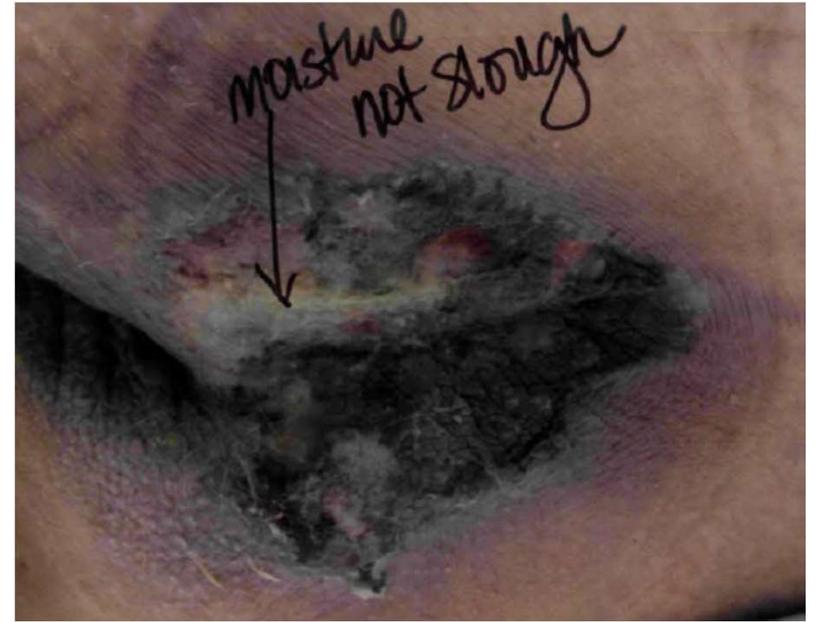
Skin Failure



Skin Failure: Case Study



4th day of admission



3 weeks

History & Physical/Outcome

- Medical History: DM, Dementia, Parkinson's, HTN, CAD, COPD, Hx of Resp. Fx , renal insufficiency, obesity, cigarette smoker. Admitted to ER after fall at home.
- PE: A&Ox3, Left shoulder pain, fx diagnosed on Xray. Skin intact. Obese
- Surgery to repair fracture performed 1st day of admission to acute care.
- 1st day post op went into respiratory failure requiring intubation and ventilator support
- Hypotensive episodes requiring vasopressor administration
- Malnutrition, Peg Tube, UTIs, Pneumonia, Sepsis
- DTI developed evolving to Stage 4 PI
- Expired 6 months after admission
- Respiratory Arrest, Multisystem Organ Failure

Risk Factors

Medical History: CAD, ASHC, HTN, Chronic Kidney Dx, DM, Neuropathy, Anemia, COPD,
cigarette smoker, Long Term ICU (3 months), Multisystem organ failure,
Respiratory failure requiring ventilator support, Acute Kidney failure/ Hemo
Dialysis,
Poly Pharmacy including Levophed administration, Malnutrition

Pertinent Labs

- Admission: O2 Sat=96%, HGB=15.2, Glucose 180H, Albumin=3.5N, BUN/Cr., WBC 8 , **Additional labs**: BUN=40H, Creat.= 3.0H, WBC=18H, Glucose 200H, Albumin=3.0L, PAB=12, CRP=40H
- Pre-Discharge: HGb/HCT WBC 12 Glucose 230 BUN/Cr 45/2.8 Alb. 2.2 PAB 10
- Treatments included enzymatic debridement
- **Microbiology** : Urine Culture: E-Coli, Stool Culture: Clostridium Diff
- Wound Culture: E-Coli+ Blood Cultures: E-Coli

Skin Integrity Assessments/Management/Outcome

- Skin Intact on admission, Braden Score: 9
- Care Plan implemented on admission: LAL, frequent T&R, Pillows, Wedges, Boots, skin Care, Skin Assessments QS and with care, Pt. & Family education, Nutritional Consult and Support, Wound Consultant
- 48 hours after admission: Blanchable redness of sacral/coccyx area. Mepilex placed (S/P > 24h of vasopressor administration)
- Nurses document frequent repositioning and episodes of drop in BP with positioning. MD ordered no T&R when hemodynamically unstable, Diarrhea developed, rectal tube placed-leaked
- Treatments included enzymatic debridement, hydrofiber dsq., antibiotic tx., surgical debridement.
- 2 weeks before Ms. Patient expired: Coccyx wound documented by WOCN as stage IV PI measured 10X14X4cm

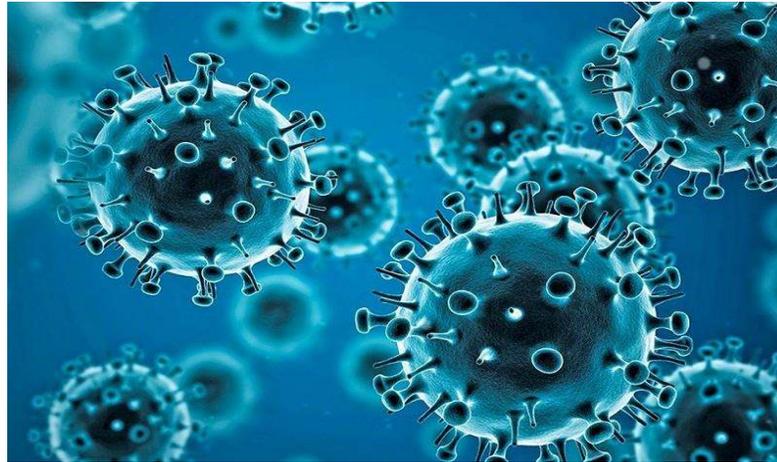
Skin Failure: A Working Definition

“Skin failure is the state in which tissue tolerance is so compromised that cells can no longer survive in zones of physiological impairment that includes hypoxia, local mechanical stresses, impaired delivery of nutrients, and buildup of toxic metabolic byproducts. This includes pressure injuries, wounds that occur at life’s end, and in the setting of multi-system organ failure.”

(Jeffrey M Levine MD Associate Professor of Geriatrics & Palliative Care Icahn School of Medicine at Mount Sinai NY, NY)



Covid-19 Affects the Skin



- Point of viral entry into cells in the respiratory and GI Tracts
- Receptors also in skin, blood cells, blood cells & kidney
- Results in hypercoagulable state, VTE, PE, and MI
- Also mesenteric ischemia and lower limb ischemia
- Results in massive inflammation- “Cytokine storm”
- Block interferon I & III (interferons “interfere” with viral replication)

Darkly Pigmented Skin

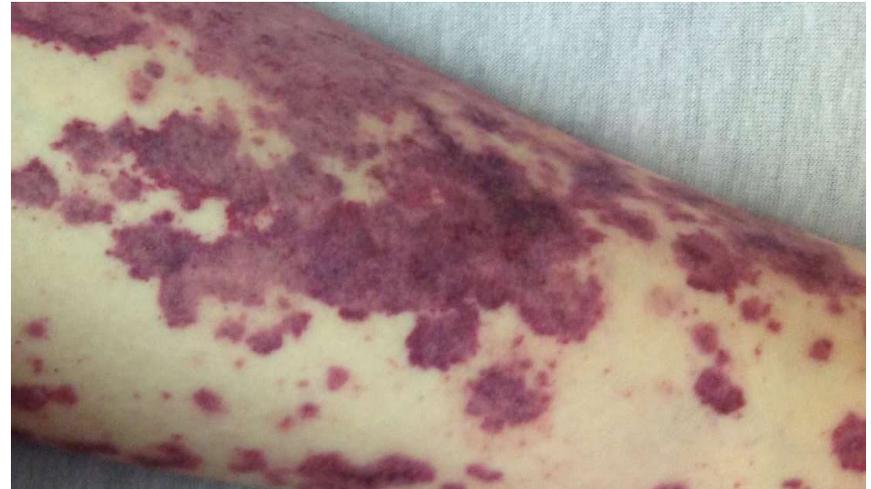


- Decreased absorption of Vit D
- Over activation of renin system
 - **Renin is secreted and angiotensin is formed
 - **Angiotensin causes widespread vasoconstriction and elevation of blood pressure & greatly increased total peripheral resistance
- Worsening of inflammation and thrombosis
- Comorbidities increase risk for risk for complications and death

Skin Changes with Covid-19



Skin Changes with Covid cont.



- Accelerated clotting and tissue ischemia create purple tissue (not always on pressure points)
- Higher risk of clotting in darkly pigmented persons
- Purpuric lesions may be warning sign of serious coagulopathy such as PE
- Often extremely ill: Septic/septic shock/vasopressors

Covid Toes are Embolic



Not Pressure

PI Prevention and Management in Covid-19 Patients

➤ Assessment: What is the etiology?

** Purple areas on non-pressure loaded surfaces lack a pressure-shear etiology and should not be classified as pressure injuries.

** Purple areas on pressure loaded surfaces (whether prone or supine) require further investigation.

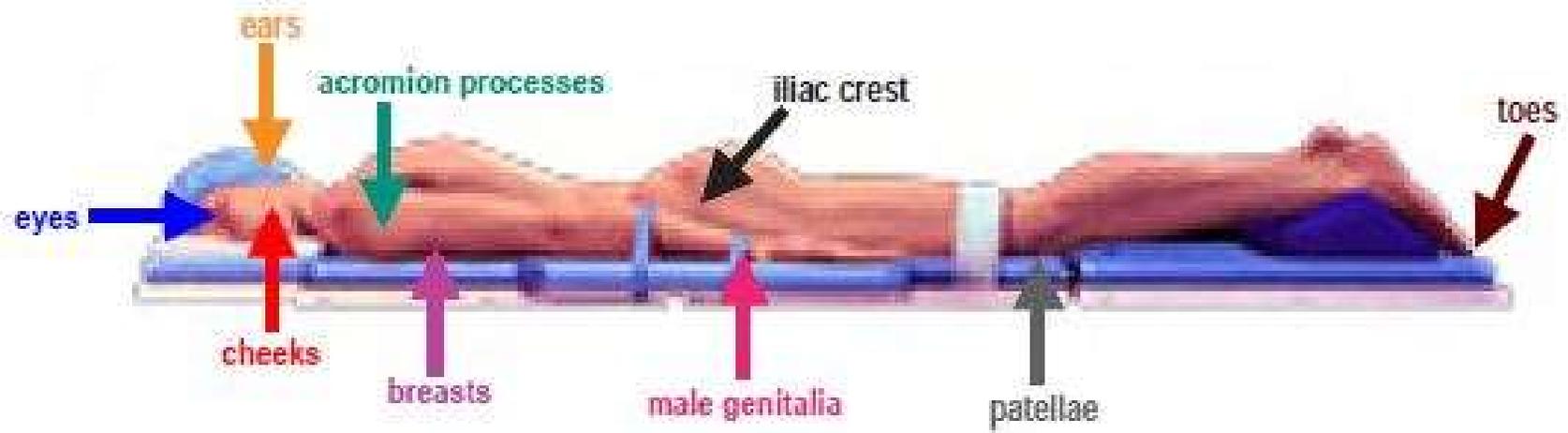
Interventions

- ▶ Risk Assessment
- ▶ Skin Assessment
- ▶ Turning and repositioning
- ▶ Treatments/medications
- ▶ Pressure Redistribution Device i.e.:
Specialty Beds & cushions, heel protectors
- ▶ Nutrition assessments and interventions
- ▶ MD and Responsible Party notification
- ▶ Education of patient and caregivers

Lying Face-Down in 'Prone Position' Can Help Improve Oxygen Levels



Figure 10: Pressure points in prone position



Prone Positioning

Pay Attention to the Head, Torso, Legs, Breasts and Genitals

- Prophylactic dressings to head, face, pressure points of legs
- Manage Moisture
- Off Load and shift head position
- Align foley catheter/fecal management devices toward foot of bed
- Offload and protect breasts and genitalia (extremely sensitive tissues)

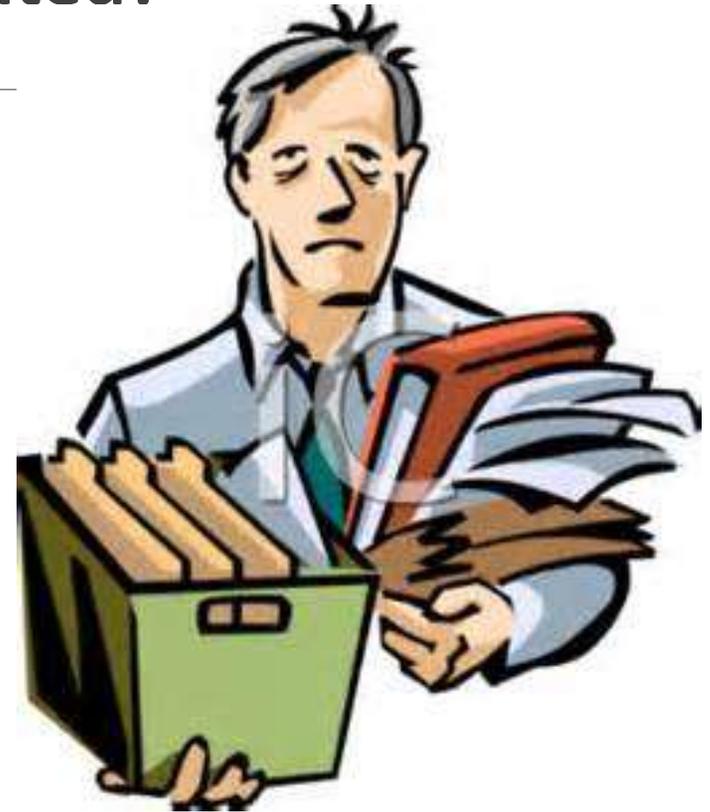
(Refer to NPIAP Website for comprehensive guidelines)

Why Is Documentation Important??

- Provides Continuity of Care
- Wound care documentation is a hot topic with the Regulatory Agencies overseeing the medical industry.
- Good Documentation is Imperative to protect all those giving care to patients
- Imperative to Preventive Legal Care.

Are the 8 elements clearly Documented?

- ▶ Comprehensive Assessment
- ▶ Care Plan (CP)
- ▶ Wound Assessment
- ▶ Infection
- ▶ Pain
- ▶ Wound Management CP
- ▶ Interventions
- ▶ MD/Patient/Family Involvement



Avoidable/Unavoidable/SOC

Bullet Proof Your Documentation



8 Tips

TIP #1 Describe what you see as specifically as possible; be cautious with diagnoses unless you are a wound or skin specialist or physician.

TIP #2 Be especially vigilant in your admission and discharge documentation of wound & skin conditions – no matter

TIP #3 If a wound or skin condition warrants referral to a specialist, obtain the referral in the most expedient manner (or recommend that the referral be obtained). Urgent referrals should be communicated directly to the healthcare professional involved.

TIP #4 Wound and skin treatments must be consistent with the overall plan of care for the patient. Determine if the wound or skin care is to be aggressive, maintenance or palliative before initiating treatment whenever possible.

TIP #5 Carefully document your interventions and the responses to your interventions and if you have notified another member of the inter professional team.

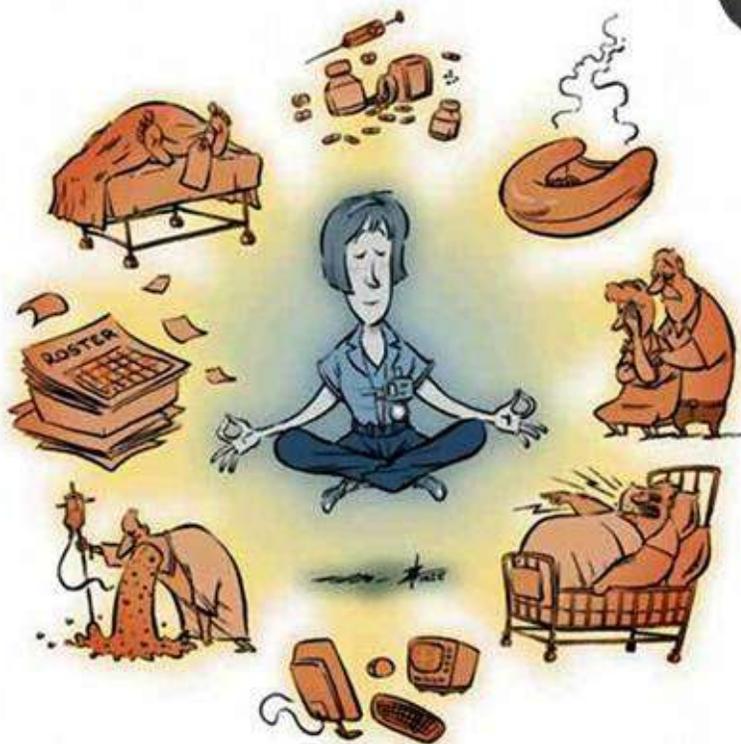
TIP #6 Change your plan of care as the patient and the wound or skin condition change and document your rationale for the change, obtaining orders PRN.

TIP #7 Carefully discuss “unavoidable” pressure injuries in the patient record.

TIP #8 When you see a red flag related to wound or skin conditions, notify the appropriate manager or risk manager.

Stress: The confusion created when one's mind overrides the body's basic desire to choke the living daylights out of some jerk who desperately deserves it

[inspiredjoyful@300.tumblr](#)



Just Breathe

What Have We Learned?

- 1. Discuss skin integrity/pressure Injury management utilizing Evidence Based Practice per National Pressure Injury Advisory Panel (NPIAP)**
- 2. Discuss Standard of care, Guidelines, Policies and Procedures & Government Regulations**
- 3. Discuss the most recent definitions per NPIAP guidelines including Staging, Deep Tissue Injury (DTI), Avoidable vs Unavoidable PI**
- 4. Define the 8 elements of pressure injury prevention/management**
- 5. Discussed Skin Failure and Covid-19: Etiology, Assessment, Interventions**
- 6. Identified the factors leading to litigation and legal care practices**
- 7. Discuss appropriate documentation**