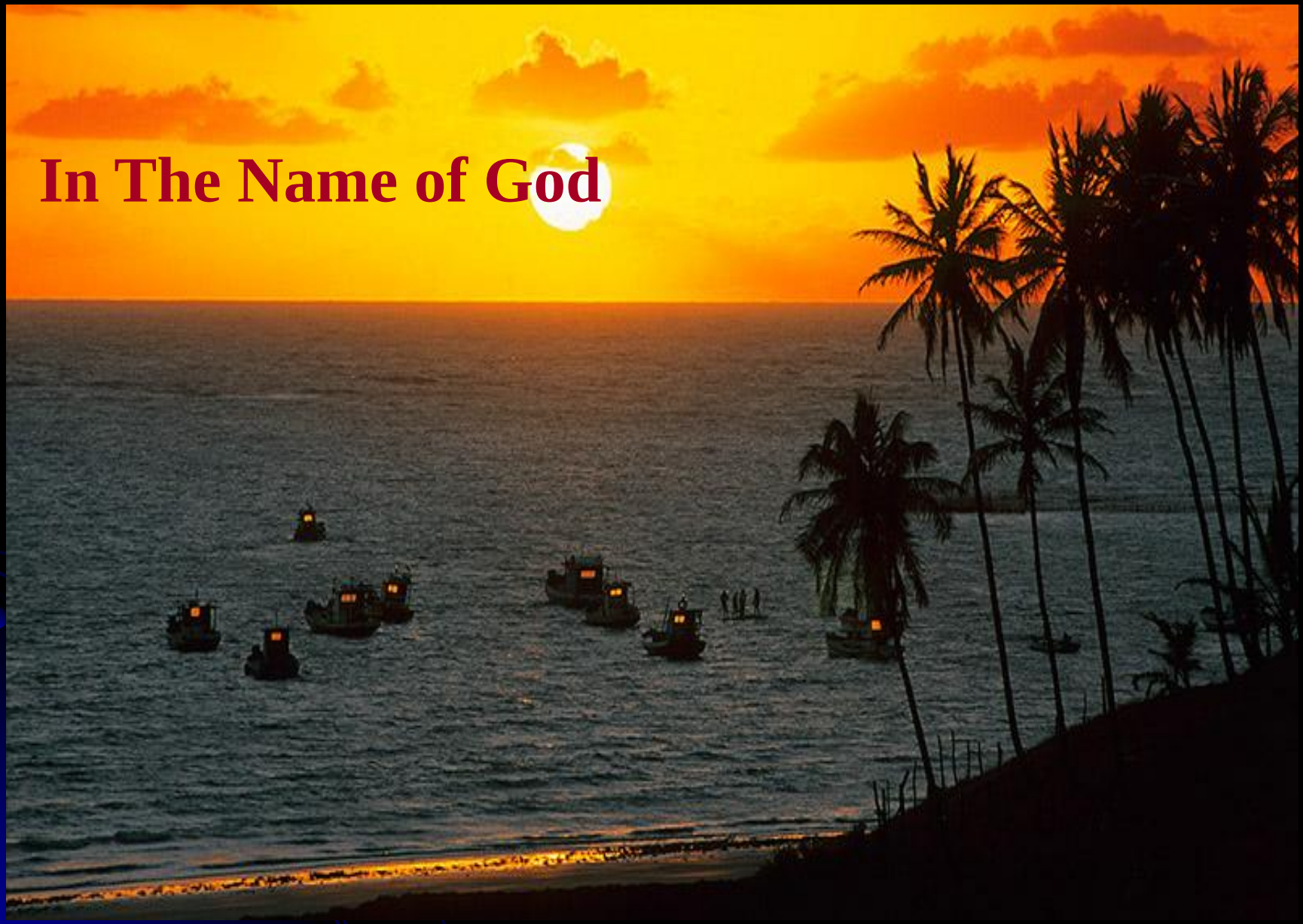
In The Name of God

کمیته ملی پیشگیری، کنترل و مراقبت از زخم معاونت پرستاری وزارت

اهمیت مسئله :

زخم فشاری یکی از مهمترین مشکلات سلامتی در بیمارستانها و جامعه است که علاوه از ایجاد درد و رنج در بیماران، طول مدت بستری و عوارض ناشی از آن را افزایش داده، و هزینه درمان بالایی برای دولت و مردم خواهد داشت .

ضرورت :

میزان بالای زخمهای فشاری در بیمارستانها و نبود سیستم کنترلی مناسب در مراکز، چه از لحاظ پیشگیری و کنترل و چه از لحاظ مدیریت و مراقبتهای درمانی، ما را بر آن داشت تا با برنامه ریزی مناسب، استفاده از منابع علمی و اساتید دانشگاه و متبحرین بالینی مرتبط با زخم، در مرتبه اول سازو کارهای پیشگیری از بروز زخمهای فشاری، و در مرتبه دوم کنترل، مراقبت و مدیریت زخمهای فشاری را پایه گذاری نماییم

اهداف:

/ ارتقای سطح شناخت و آگاهی پرستاران در رابطه با زخم فشاری و اتخاذ شیوه های مناسب برای پیشگیری ،کنترل و مدیریت آن

/ کاهش میزان بروز و کنترل زخمهای فشاری در بیماران بستری

ساختار سازمانی :

/ مسئول کمیته ملی پیشگیری، کنترل و مراقبت از زخم معاونت پرستاری وزارت

// رابط مسئول زخم دانشگاه

مستقر در اداره پرستاری و تحت نظر مدیر پرستاری دانشگاه

/// پرستار مراقب زخم (یک تا سه نفر)

مستقر در بیمارستان و تحت نظر مدیر پرستاری بیمارستان

فعالیتهای انجام شده :

/ ارسال نامه به کلیه دانشگاهها برای تعیین رابط مسئول زخم دانشگاهها و تامین اجتماعی و بانک ملی و سایر سازمانهای غیر دولتی و برگزاری کلاس دو روزه مدیریت زخمهای فشاری برای رابطین مسئول زخم در سالن کنفرانس وزارت در سال 95

/ تهیه فرم ارزیابی- پیشگیری از زخمهای فشاری به همراه فرم راهنمای تخصصی و ارسال به کلیه دانشگاههای کشوردر سال 95

/ تهیه فرم مدیریت زخمهای فشاری به همراه فرم راهنمای تخصصی و ارسال به کلیه دانشگاههای کشور در سال 95

/ تعیین شرح وظایف رابط مسئول دانشگاهها و پرستار مراقب زخم بیمارستانها و ارسال آن به کلیه دانشگاهها در سال 95

/ برگزاری کلاس دو روزه مدیریت زخم فشاری در زاهدان، مشهد، و تهران – بترتیب با هماهنگی دانشگاه علوم پزشکی زاهدان، مشهد و انجمن علمی پرستاران قلب ایران در سال 95

/ برگزاری کلاس یک روزه شناخت و پیشگیری از زخمهای فشاری برای کارشناسان کنترل عفونت و کارشناسان مسئول ایمنی تبریزبا هماهنگی دانشگاه علوم پزشکی تبریز در سال 95

/ برگزاری کلاس یک روزه شناخت و پیشگیری از زخمهای فشاری برای اعضای هیات علمی و دانشجویان دکترا و ارشد پرستاری دانشکده پرستاری تبریز با هماهنگی دانشگاه علوم پزشکی تبریز

فعالیتهای در پیش رو :

/ برگزاری کلاس یک روزه شناخت و پیشگیری از زخمهای فشاری برای سوپروایزران آموزشی کلیه بیمارستانهای کشور در 10 منطقه آمایشی در تاریخهای از قبل مشخص شده بر اساس محتوای آموزشی یکسان و تخصصی که خدمتشان ارسال شده است (تا آنها نیز در بیمارستانهای خود شناخت و پیشگیری را به کلیه پرستاران آموزش دهند)

/ برگزاری کلاسهای دو روزه مدیریت زخم فشاری برای پرستاران مراقب زخم بیمارستانهای کشور بر اساس محتوای آموزشی تخصصی یکسان در دانشگاههای کشور، با هماهنگی و توسط دانشگاههای علوم پزشکی کشور با استفاده از اساتید با مدرک ارشد و به بالا که حتما سابقه کار بالینی در زخم داشته باشند تا آخر تابستان 96 (در صورت نیاز از اساتید شناخته شده معاونت پرستاری استفاده خواهد شد)

/ برگزاری جلسه کارگروه تخصصی برای برگزاری دوره های کوتاه مدت حرفه ای

همکاری سازمانی

همکاری مدیران محترم پرستاری دانشگاهها

همکاری مدیران محترم پرستاری بیمارستانها

(کلاسهای آموزشی ، برنامه نویسی و حمایت پرستاران زخم)

(صداقت در آمارگیری)

Pressure Injury
(PrI)

Dr Bahram Ghaderi
Ph-D in Surgical Nursing

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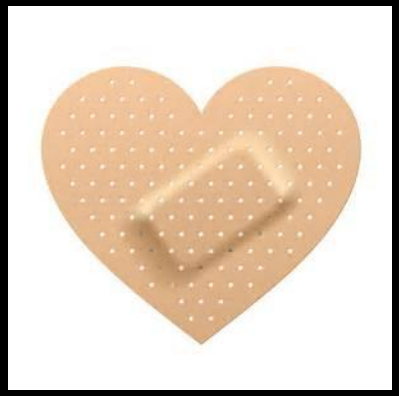
Mobile : 09143141493



Current State in Presure Injury Management

- High Pressure Injury in Hospitals

Hospital Stay, Cost, Pain, Complication, Staff Workload

- No Responsibility
- Mismanagement
- No Statistics
- No Systematic Program

Pressure Ulcer (III and IV) is Never Event

WORLD WIDE

STOP

PRESSURE ULCER DAY

www.epuap.org

The cost of healing 10 pressure injuries is equivalent to...

knee replacements

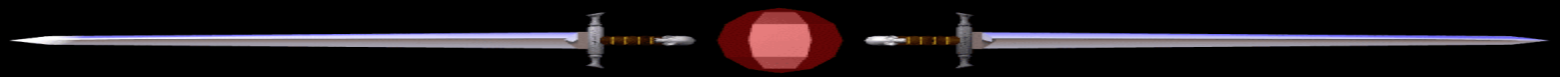
hip replacements

pacemakers

bypass operations*

*from the EPUAP Vimeo video http://www.epuap.org/stop-pressure-ulcer-day/

Team Approach in PrI Management



- **Staff Nurse**
- **Wound Manager Nurse**
- Safety Control Nurse
- Infection Control Nurse
- Physician
- Dietician
- Physical Therapy

Wound Management Supervisor

- Education
- Supervision
- Data Collection
- Documentation

Education, Education, Education

Supervision

Classification of Wounds

ACUTE

Usually trauma or surgery

Heals quickly through a well orchestrated process

3 phases of healing with limited local care

CHRONIC

Usually disease

Healing not timely or orderly

Longer healing time due to :

Pressure, Inflammation, Poor nutrition, Disease, Poor circulation

May require active wound treatment to heal

Classification of Wounds

Acute	Chronic
abrasion	pressure
laceracion	diabetic
Crush injury	arterial
puncture	venous
donor site	
surgical	
burns	
bite	

Abrasion





Laceracion






Crush injury

Puncture wound

Donor site wound

Surgical site wound

Burns

Bite wound






Diabetic foot ulcer

Vascular ulcer

Pressure ulcer

Pressure Injury

A pressure Injury is a localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of :

pressure
shearing and friction
moisture

Pressure Injuries May Not be Preventable

- Aggressive measures can reduce but not eliminate the incidence of pressure ulcers
- Can develop despite best efforts of clinical team in high risk patients
- A systematic approach to recognize and manage pressure ulcers is needed

Aim of the program

- **Increase awareness of PIs among health care professionals.**

- identify patients at risk of PI,
- identify strategies to assess PIs and factors related to their risk,
- prevent or delay complications associated with PIs,
- optimise management of PIs,
- optimise quality of life.

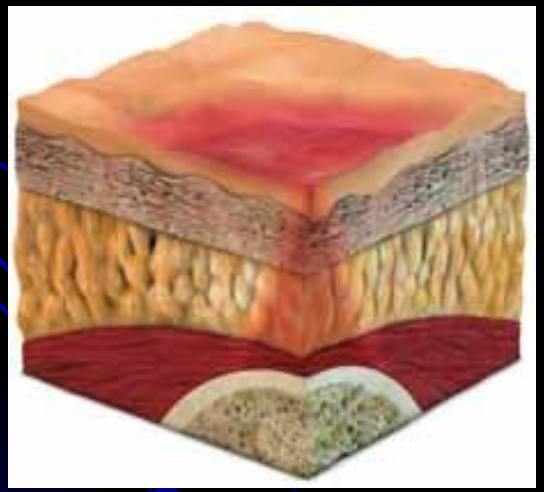
Classification of Pressure Injuries

The staging of pressure ulcers, as defined by national guidelines (NPUAP), allow for common understandings for healthcare professionals. The staging of a pressure ulcer reflects the amount of tissue damage.

- STAGE I
- STAGE II
- STAGE III
- STAGE IV
- SUSPECTED DEEP TISSUE INJURY (DTI)
- UNSTAGEABLE

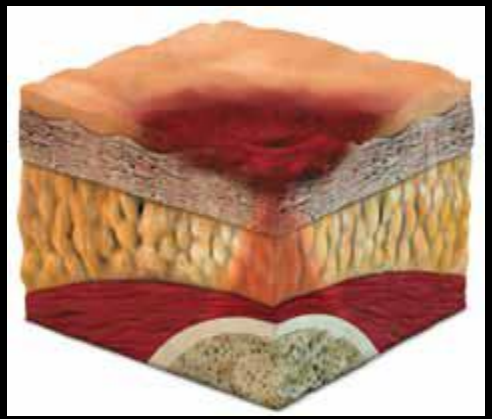
Stage I Pressure Injury

- Intact skin with non-blanchable redness of a localised area usually over a bony prominence.
- Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area.
- The area may be painful, firm, soft, warmer or cooler compared to adjacent tissue.
- May be difficult to detect in individuals with dark skin tones.
- May indicate “at risk” persons (a heralding sign of risk).



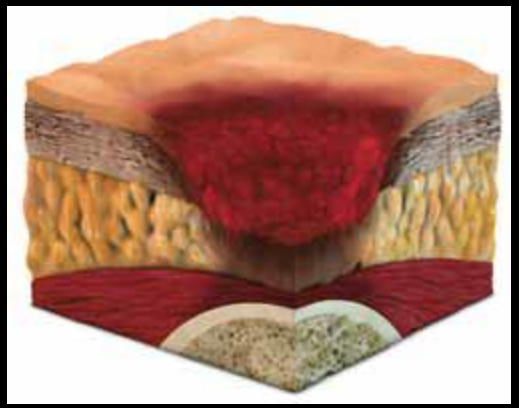
Stage II Pressure Injury

- Partial thickness loss of dermis presenting as a shallow, open wound with a red-pink wound bed,without slough.
- May also present as an intact or open/ruptured serum-filled blister.
- Presents as a shiny or dry, shallow ulcer without slough or bruising.
- Stage II should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation.



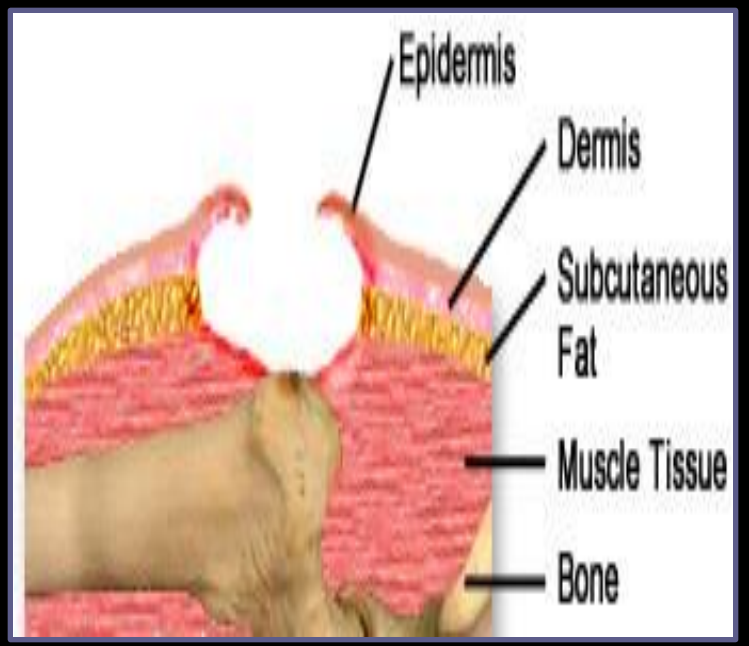
Stage III Pressure Injury

• Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunnelling.
• The depth of a stage III PI varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and stage III PIs can be shallow. In contrast, areas of significant adiposity can develop extremely deep stage III PIs. **Bone or tendon is not visible or directly palpable.**



Stage IV Pressure Injury

Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often include undermining and tunneling.

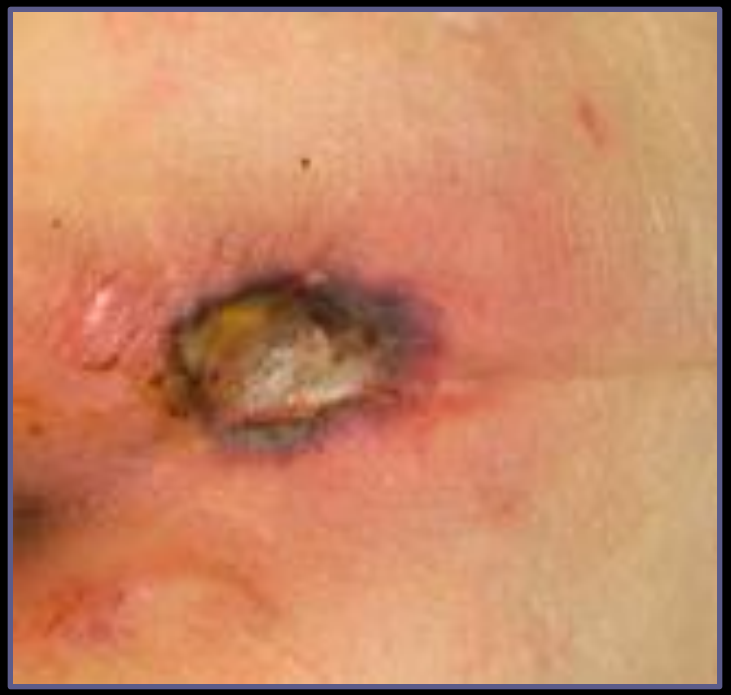


Suspected Deep Tissue Injury

Purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue.

Unstageable Pressure Injury

Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed. Base of the wound cannot be visualized.

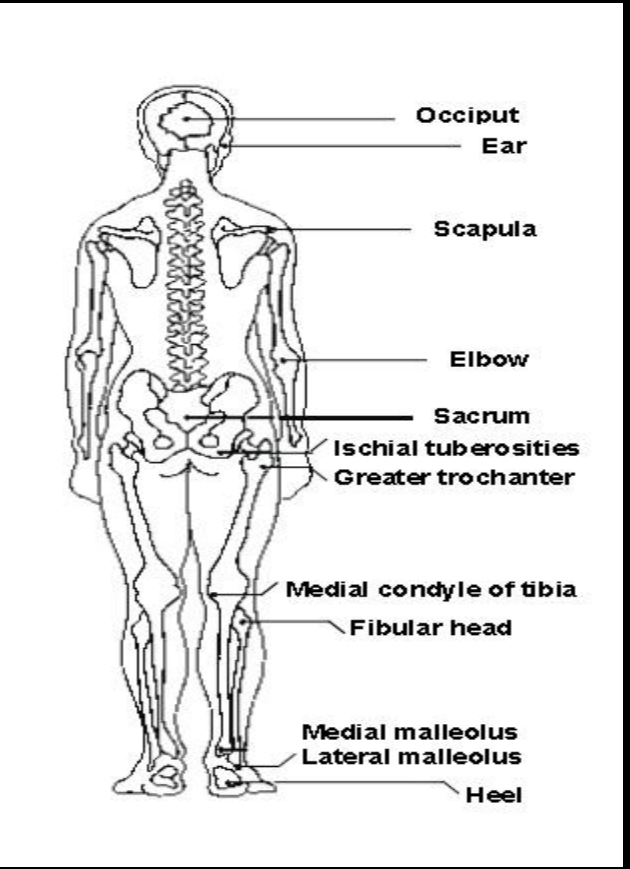


Common Pressure Injury sites

Supine:
23% sacro-coccygeal
8% heels
1% occiput; spine

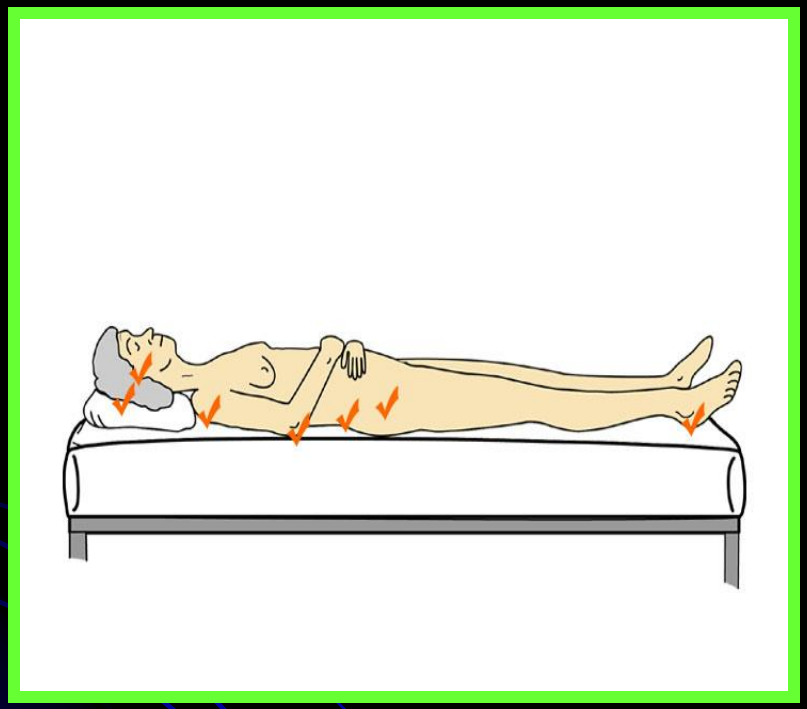
Sitting:
24% ischium
3% elbows

Lateral:
15% trochanter
7% malleolus
6% knee
3% heels

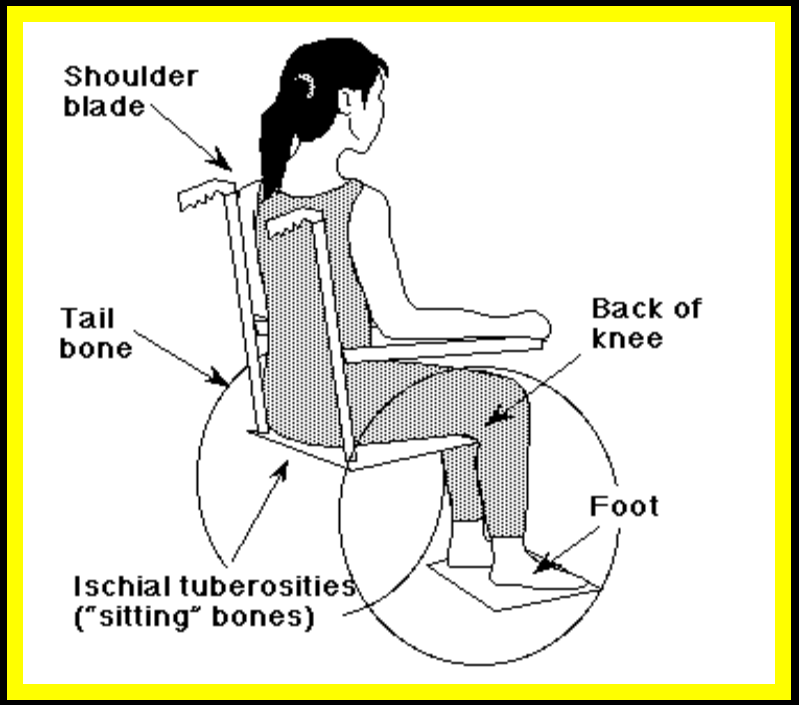


Common places to find a pressure Injury

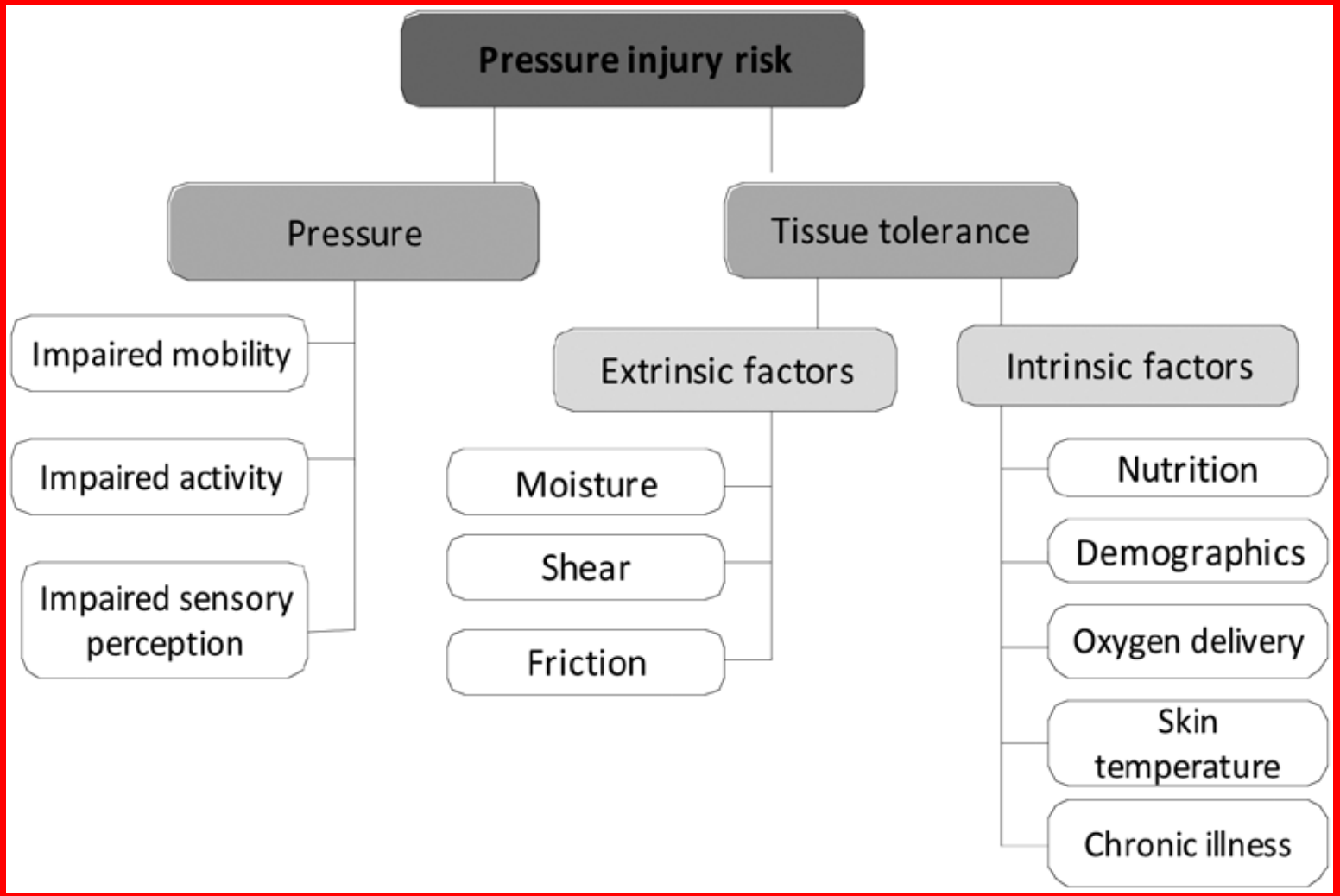
Bed Fast



Chair Fast



Pressure ulcers usually form over a bony part of the body


Pressure injury risk
Pressure
Tissue tolerance
Impaired mobility
Impaired activity
Impaired sensory perception
Extrinsic factors
Intrinsic factors
Moisture
Shear
Friction
Nutrition
Demographics
Oxygen delivery
Skin temperature
Chronic illness

Risk Factors

PrI risk-factors in General :

Diabetes Mellitus , Peripheral Vascular Disease , Anemia, CVA , MS
COPD & lung disease

PrI risk-factors in OR :

Type of surgery , Type of operation , Time in anesthesia , Time in surgery
Vasopressors , Hypothermia (duration) , IABP

PrI risk-factors in ICU :

BP in admission , Vasopressors , Sedatives , Narcotics , MV , IABP
Restraint , GCS

Variations in neonatal skin

Deficient in collagen Dermal instability

Underdevelopment of the Stratum Corneum

Decreased cohesion between Epidermis and Dermis

Dermis of the newborn is only 60% as thick as adult dermis

Neonates may also have excessive evaporative heat and fluid losses

Increased susceptibility to infection, toxicity from topically substances

The greatest risk factor for Pressure Injury

between hospitalized neonates
is the belief on the part of health professionals,

that the PrIs are not a problem in neonates

Pressure Injury III and IV are a NEVER-EVENT

Hospital acquired pressure Injuries (HAPI) have been classified as a NEVER-EVENT

Never-Events are hospital associated problems that occur in the hospital/institutional setting that can be prevented

Never-Events will not be reimbursed by insurance companies

Never-Events must be reported

Hospital Acquired pressure injuries may not be covered, the hospital will have to absorb the cost of these injuries

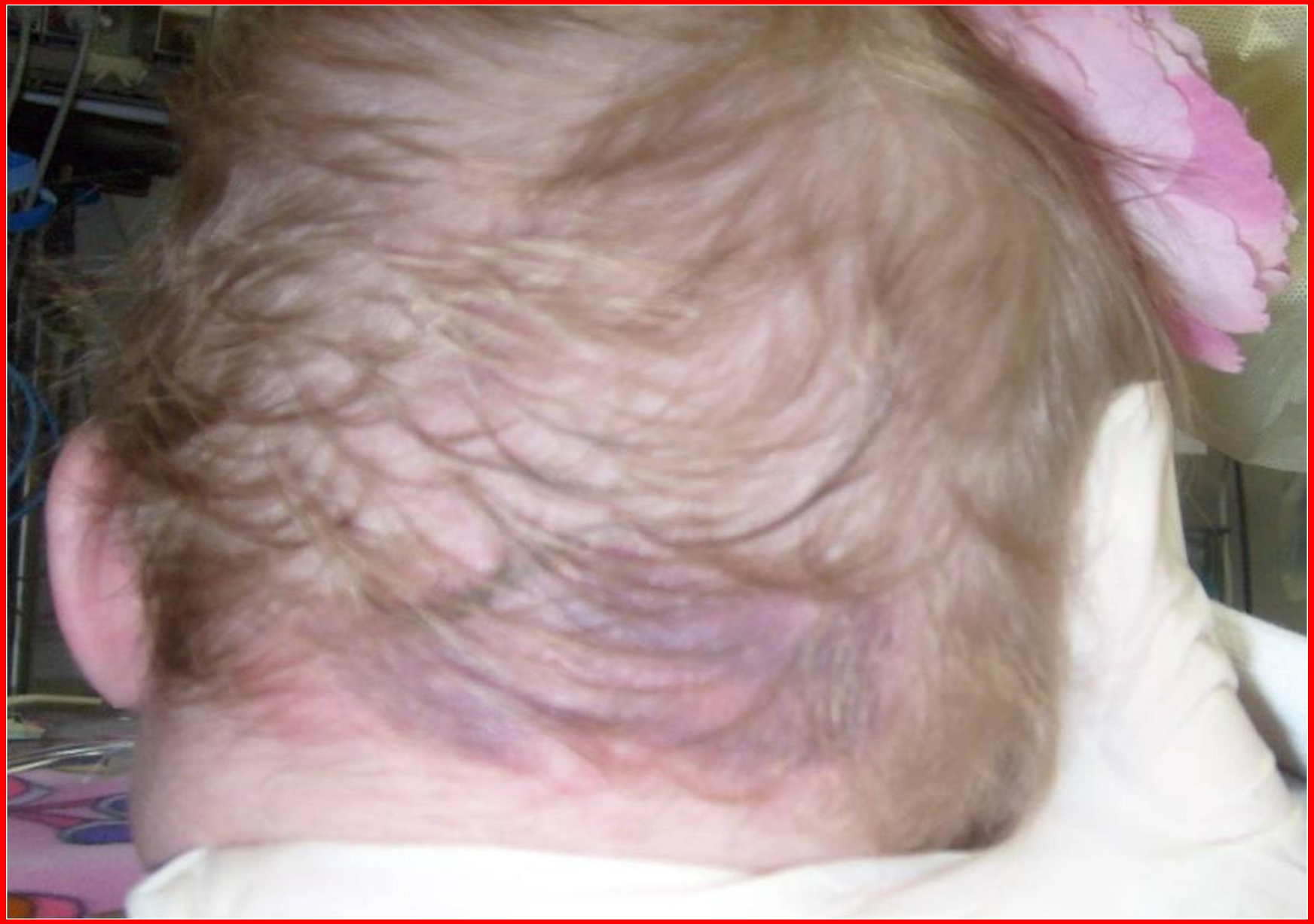
PrI in Neonates

Among neonates and children, more than 50% of pressure ulcers are related to equipment and devices.

Frequent skin assessments under blood pressure cuffs, transcutaneous oxygen pressure probes, tracheostomy plates, nasal prong and mask CPAP, arm boards, plaster casts, and traction boots are important preventive measures.

Beds, cribs, and isolettes must be inspected to ensure that tubing, leads, toys, and syringe caps are not under or on top of patient's skin.

The skin around nasogastric and orogastric tubes, head dressings, and hats should be assessed for pressure damage.



Medical Device-Related Pressure Injury (MDRPI)

- Localized injury to the skin or underlying tissue as a result of sustained pressure from a device (Black, 2010)

  - Tissue injury usually mimics the shape of the device
  - Tend to progress rapidly due to lack of adipose tissu

Comparison

Location	Device	Non Device
Head/Face/Neck	70.3%	7.8%
Heel/Ankle/Foot	20.3%	16.9%
Coccyx/Buttocks	7.8%	67.5%
Sacrum	1.6%	16.9%


03/12/2008


7/19/10
cm 1 2 3 4 5 6
Sterile in unopened, undamaged package. Single patient use.
Warning: This product has been sterilized using
a chemical known to the state of California
or other reproductive harm as


3M™ Wound Measuring Guide
MD 3/2/07
3M Skin Health
WOCN Image Library

Skin Assessment

Clinical Pathway

A clinical pathway is a structured multidisciplinary plan of care designed to support the implementation of clinical guidelines.

The first step in clinical pathway is the performance of a

comprehensive skin assessment

Prevention start with this seemingly easy task

Comprehensive Skin Assessment

Process by which the entire skin of every individual is examined for any abnormalities.

It requires looking and touching the skin

from ***head to toe***

With a particular emphasis ***over bony prominences***

Inspection and ***palpation*** are key

Comprehensive Skin Assessment

Usual practice includes assessing the following parameters :

Temperature , Color , Moisture level , Turgor , Skin integrity

Persistent erythema
Non-blanching hyperaemia
Blisters
Localised oedema
Localised hardness or softness
Purplish/bluish localised areas
Warm or cool areas
Wet area

Abnormal areas

Comprehensive Skin Assessment

Hand washing before and after the examination, or use gloves before the procedur are important.

Make sure the patient is comfortable.
Minimize exposure of body parts.
be sure to have good lighting.
Ask for assistance to turn the patient , if needed.

Look at the skin underneath any devices such as oxygen tubing, indwelling catheter, restraint, …

Comprehensive Skin Assessment

the result of the comprehensive skin assessment must be documented in the patient‘s **medical record** and **communicated** among staff

Braden Risk Assessment Scale

Sensory/ Mental	Moisture	Activity	Mobility	Nutrition	Friction/ Shear
1. Totally limited	1. Constantly moist	1. Bedfast	1. 100% immobile	1. Very poor	1. Frequent sliding
2. Very limited	2. Very moist	2. Chairfast	2. Very limited	2. < ½ daily portion	2. Feeble corrections
3. Slightly limited	3. Occasionally moist	3. Walks w/ assistance	3. Slightly limited	3. Most of portion	3. Independent corrections
4. No impairment	4. Dry	4. Walks w/out assistance	4. Full mobility	4. Eats everything	

Total Braden Score _____

15-16 Mild Risk 12-14 Moderate Risk <12 High Risk
15-18 is considered Mild Risk for those > 75 years

Braden Q Scale

Sensory Per.	Moisture	Activity	Mobility	Nutrition St.	Friction/ Shear	Tissue Perfusion & Oxygenation

Steps for preventing pressure ulcers

Identify patient at risk

&

Implementing prevention strategies for “at risk” patients

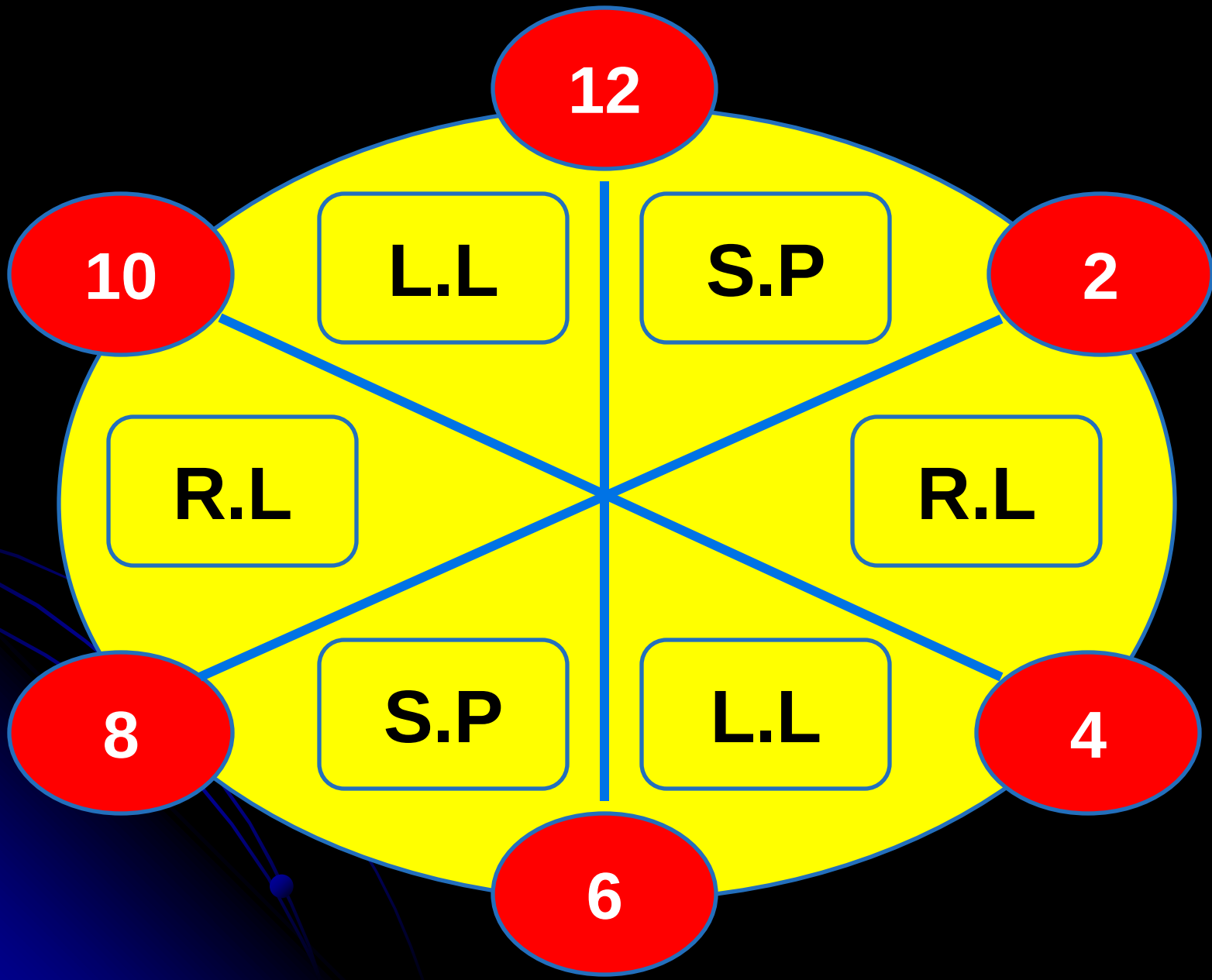
PU Prevention Recommendations

- Risk assessment
- Skin assessment
- Minimize pressure
- Minimize friction and shear
- Manage incontinence/moisture
- Assessment and management of pain
- Manage of nutrition and hydration needs
- Provide patient and family members education

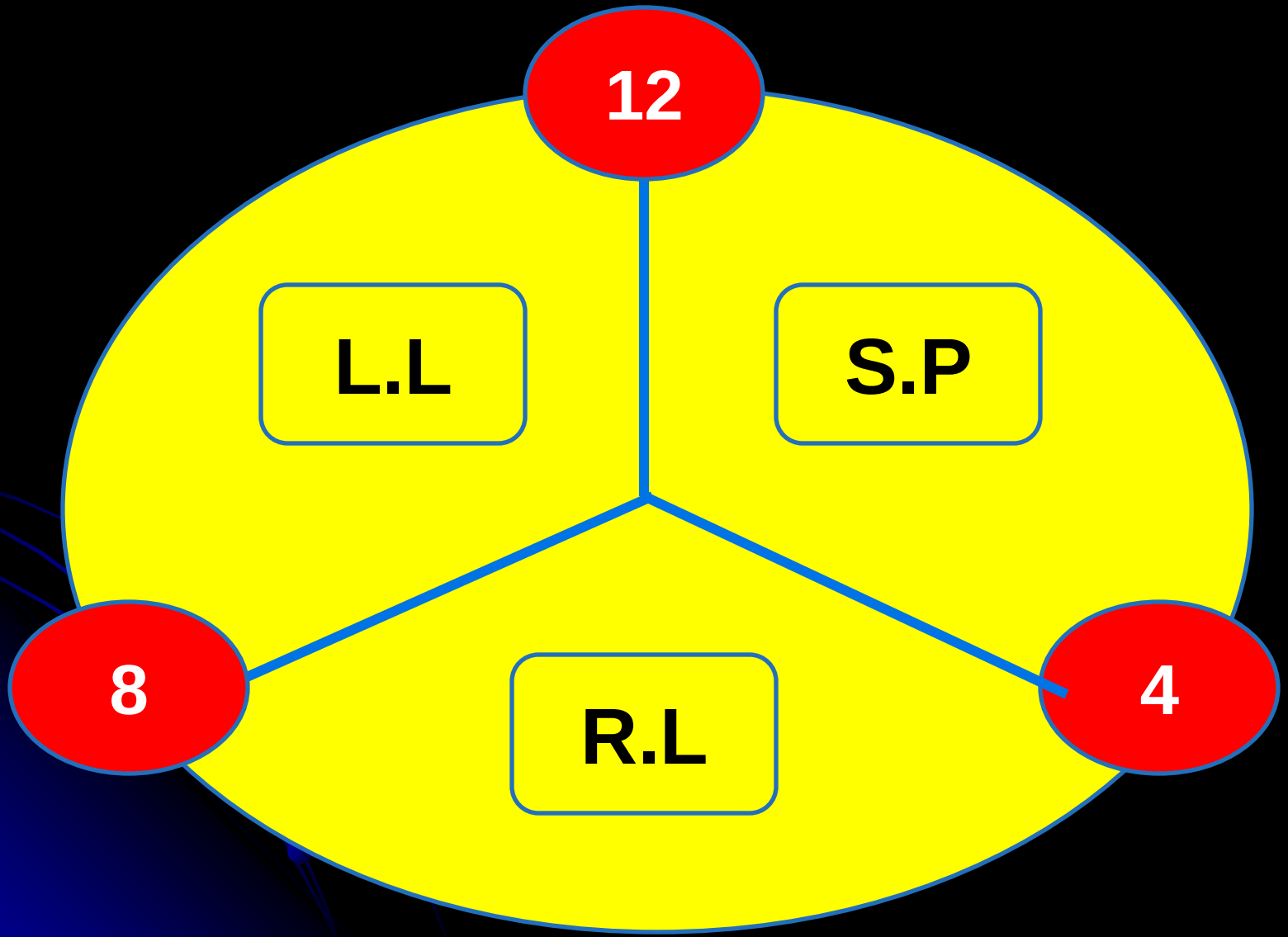
Minimize pressure
Minimize friction and shear

- Reposition bed-bound persons at least every two hours, neonates and children in ICUs every four hours, and chair-bound persons every hour .
- Teach chair-bound persons, who are able, to shift weight every 15 minutes.
- Consider postural alignment, distribution of weight, balance and stability, and pressure redistribution when positioning persons in chairs or wheelchairs.
- Use a written repositioning schedule.

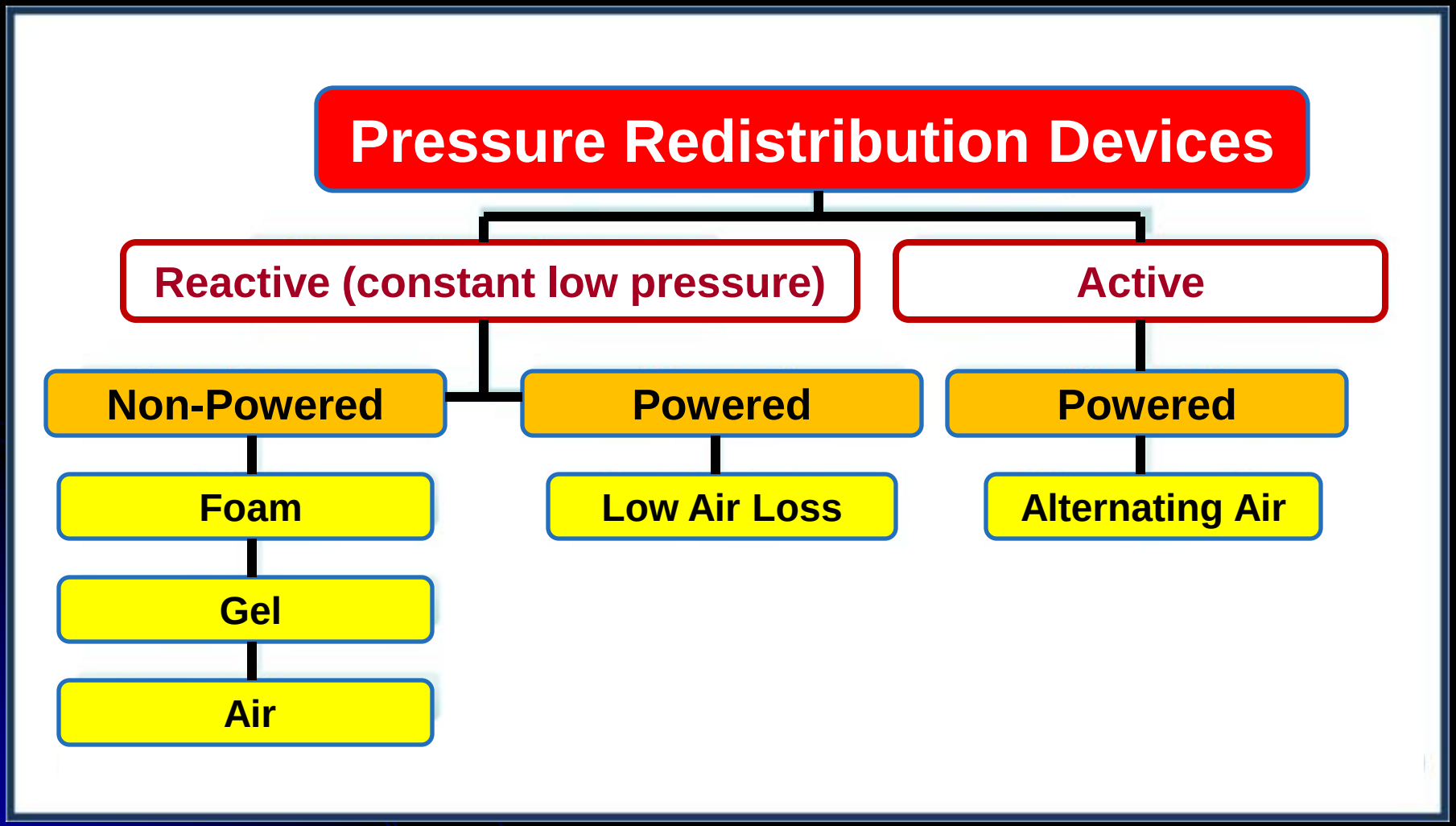
Turn Clock Position Model



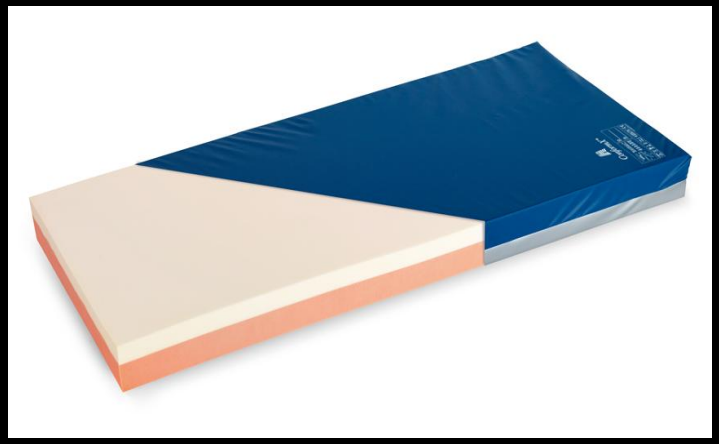
Turn Clock Position Model
In Neonates & Pediatrics in ICUs



Minimize pressure



Pressure Redistribution Devices



Minimize pressure
Minimize friction and shear

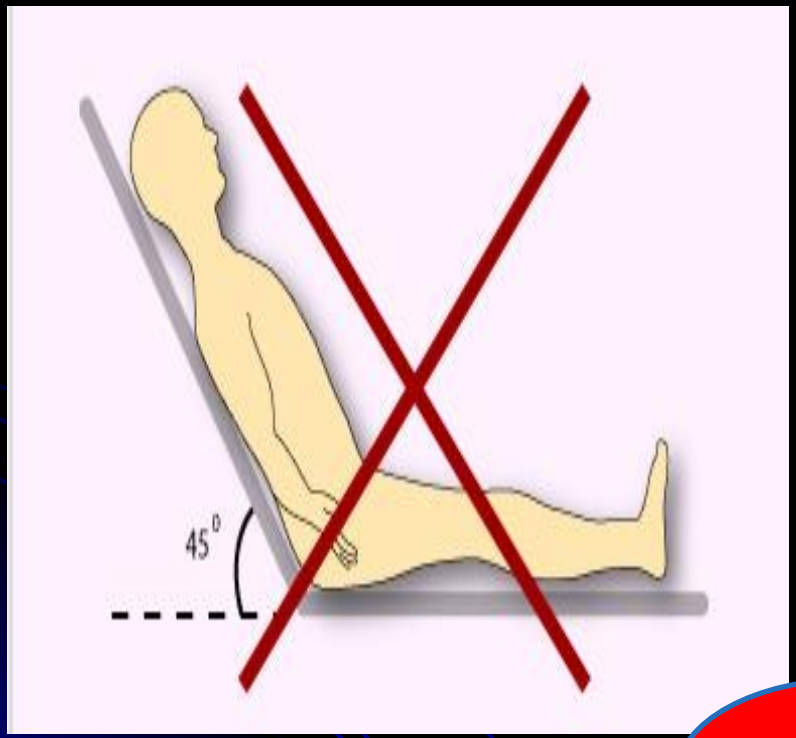
- Use lifting devices (e.g., trapeze or bed linen)
- Lift the persons rather than drag them during transfering and position changes.
- Avoid using donut-type devices and sheepskin
- Avoid using water-filled gloves under heels
- Massage over skin, not skin on under tissue
- Avoid massage over bony prominences

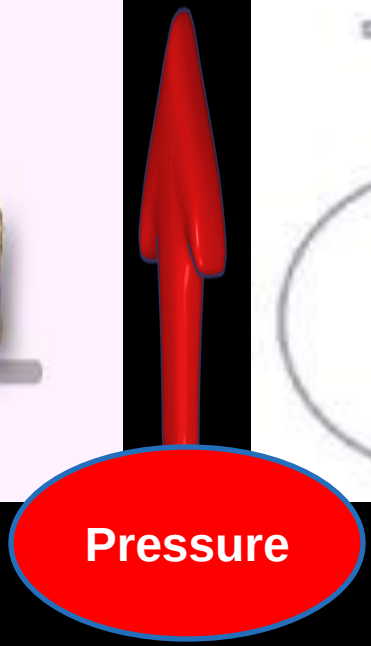
Effects of Positioning on Pressure

Pressure

Pressure

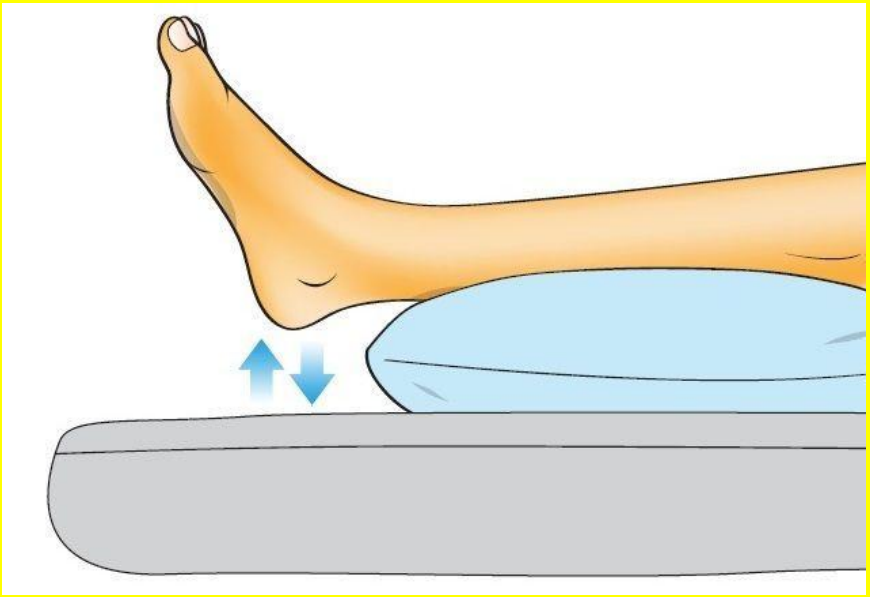
Effects of Positioning on Pressure





Minimize pressure
Minimize friction and shear

- Use pillows or foam wedges to keep bony prominences, such as knees and ankles, from direct contact with each other.
- Use devices that eliminate pressure on the heels.
- For short-term use with cooperative patients, place pillows under the calf to raise the heels off the bed.
- Maintain the head of the bed at or below 30° or at the lowest degree of elevation consistent with the patient' medical condition.




HeelZup® Cloud
Heel Suspension and Leg Elevation Cushion
SMALL SIZE - HEIGHT RANGE OF 5'6" AND UNDER
Maximum Weight Capacity—300 Pounds
Float the heels as shown.
Thigh Area
iti

Manage incontinence/moisture

- Individualize bathing frequency.
- Use a mild cleansing agent.
- Avoid hot water and excessive rubbing.
- Use lotion after bathing.
- Establish a bowel and bladder program for patients with incontinence.
- When incontinence cannot be controlled, cleanse skin at time of soiling, and use a topical barrier to protect the skin.

Manage incontinence/moisture

- Select under pads or briefs that are absorbent and provide a quick drying surface to the skin.
- Consider a pouching system or collection device to contain stool and to protect the skin.
- Use moisturizers for dry skin.
- Minimize environmental factors leading to dry skin such as low humidity and cold air.

Protective Barriers

- Hydrocolloid
- Foam
- Barrier Cream
- Barrier Spray

Manage of nutrition and hydration needs

- Identify and correct factors compromising protein/calorie intake consistent with overall goals of care.
- Consider nutritional supplementation/support for nutritionally compromised persons consistent with overall goals of care.
- If appropriate offer a glass of water when turning to keep patient/resident hydrated.
- Multivitamins with minerals per physician's order.
- Vitamins A, C, and E and zinc.


WITH THANKS

PRESSURE ULCER SCALE FOR HEALING
ESCALA PUSH

LENGTH X WIDTH (in cm^2)	0 0	1 < 0.3	2 0.3 – 0.6	3 0.7 – 1.0	4 1.1 – 2.0	5 2.1 – 3.0	Sub-score
		6 3.1 – 4.0	7 4.1 – 8.0	8 8.1 – 12.0	9 12.1 – 24.0	10 > 24.0	
EXUDATE AMOUNT	0 None	1 Light	2 Moderate	3 Heavy			Sub-score
TISSUE TYPE	0 Closed	1 Epithelial Tissue	2 Granulation Tissue	3 Slough	4 Necrotic Tissue		Sub-score
							TOTAL SCORE

Complications

cellulitis , osteomyelitis , septic arthritis sepsis , endocarditis , meningitis

Wound Location

The wound location should be precisely identified.

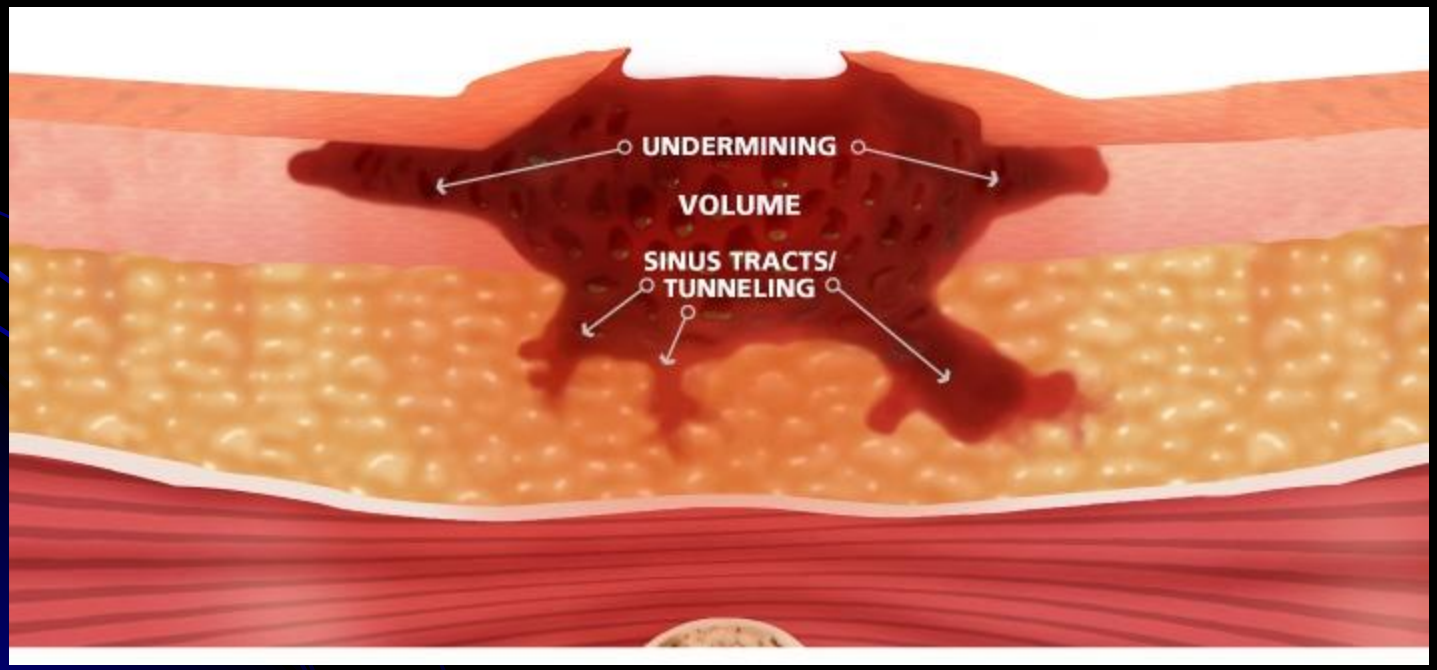
Use directional terms such as left or right,medial or distal, and the correct anatomic location.

Buttocks: sacral, coccyx, ischium, trochanteric, etc.

Abdomen: RLQ, RUQ, Suprapubic, etc.

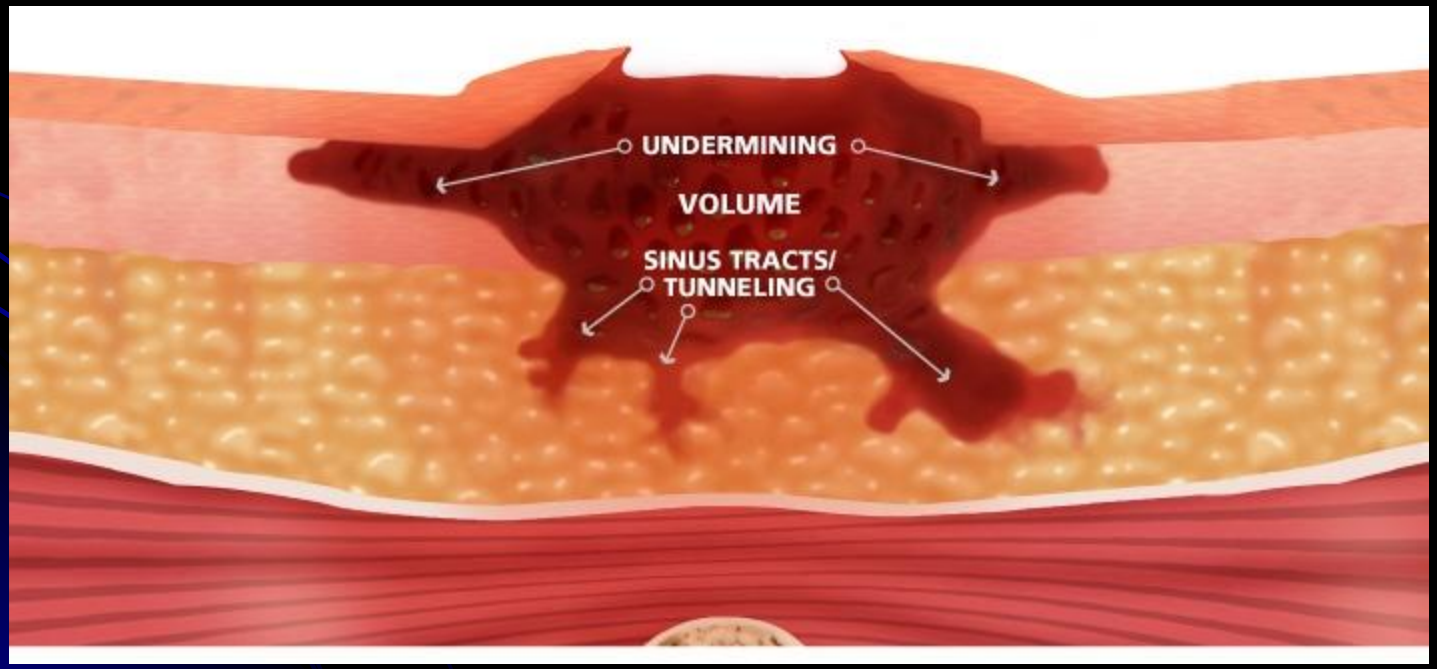
Wound Dimensions/Size

Length– head to toe dimension
Width– side to side; greatest width perpendicular to the length
Depth– from visible to the deepest area



Tunneling , Undermining

Tunneling is a pathway that can extend in any direction from the wound and results in dead space with potential for abscess formation. Also called sinus tract
Undermining is a area of tissue destruction underlying intact skin along the wound margins.



Wound Base

Healthy Tissue

- ✓ Granulation – red/pink, moist and beefy appearance
- ✓ Epithelialization - dry, deep pink to pearly pink.
- ✓ Maturation - light purple from edges in full thickness wounds or may form islands of superficial wounds

Necrotic tissue

Slough – yellow, tan

Eschar – black, brown

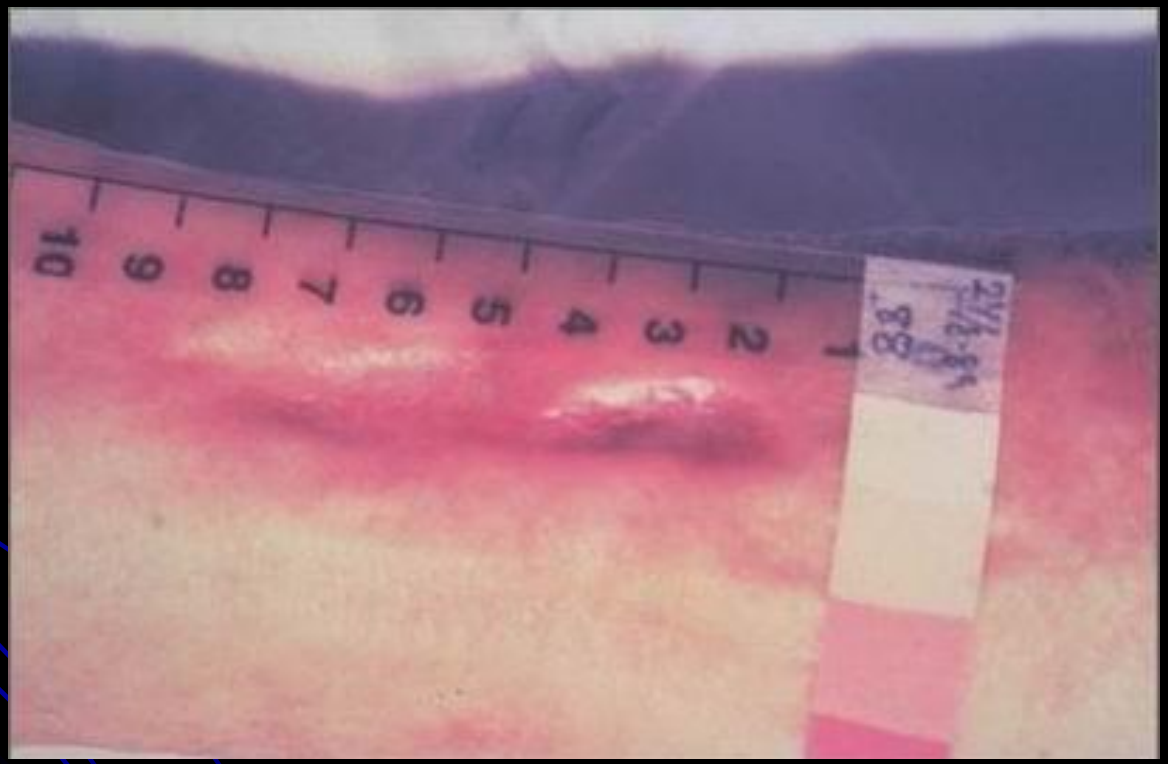
Black Necrosis

Yellow Necrosis

Granulation

Epithelialization

Maturation



Periwound Skin

4 cm of the wound edges
- Edema / Pitting, Non pitting
- Induration
- Erythema
- Periwound Pain
- Maceration
- Rash
- Absence of hair

Wound Exudate

Serous – clear to light color , Thin, watery
Normal during inflammatory and proliferative phases of healing.

Serosanguinous – light red to pink , Thin, watery
Normal during inflammatory and proliferative phases of healing.

Sanguineous – Red , Thin, watery
Indicates disruption of blood vessels

Purulent – Yellow or tan , thick
Signals wound infection

1/ mechanism of onset

Surgical wounds generally heal faster than traumatic wounds, because there is less cell and tissue damage in surgical wounds.

Wound due to underlying pathology often become chronic, due to the comorbidities and changes in the wound bed.

2/ Wound dimensions

Wound shape, size and depth affect the rate of healing.

Circular wound close more slowely than square or rectangular wounds, which close more slowly than linear wounds.

Large and full-thickness wounds heal more slowly than small or superficial wounds.

Changes in wound surface over time can assist with predicting wound healing.

3/ Temperature

Wound and environmental temperature affect wound healing.

Maintaining a normothermic wound environment at 37-38 degrees celsius has been shown to improve wound healing.

Chronic wounds have been found to be hypothermic, measuring 5-6 degrees below normal body temperature.

4/ Wound hydration

Desiccation slows epithelial cell migration resulting in delayed healing.

When a wound is covered, its fluids are trapped, maintaining a moist environment.

These fluids:

Stimulate collagen synthesis
Induce angiogenesis
Enhance contraction
Contain growth factors and enzymes

There is a delicate balance between a moist wound and a wet wound.

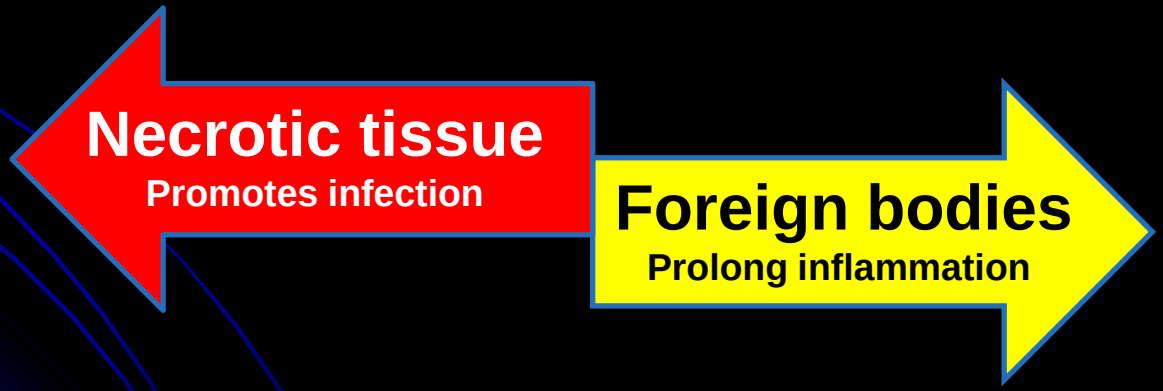

Not enough moisture
Too much moisture
dry wound bed
macerated periwound
painfull
Possible increase in wound size
slower healing
Slower healing

5/ Necrotic tissue or foreign bodies

Necrotic tissue is dead, devitalized tissue present in the wound bed.

Necrotic tissue promotes infection

Foreign bodies prolong inflammation



6/ infection

Wound infection is the invation and multiplication of microorganisms in body tissues.

High concentration of microorganisms impair wound healing by competing with body cells for oxygen and energy, and by secreting cytotoxic substances.

Infection :

Prolongs inflammation
Promotes wound dehiscence
Increase scaring
Slow wound healing

Wound bed preparation

Debridement
Bacterial control
Exudate management

Methods of debridement

Sharp
Autolytic
Enzymatic
Mechanical
Biological
Surgical

Sharp debridement

Sharp debridement involves using forceps, scissors, or a scalpel to selectively remove devitalized tissue, foreign materials, and debris from a wound bed.

Fastest and most aggressive form of debridement outside of surgery.

Sharp debridement

Types of sharp debridement

Selective sharp debridement
Serial instrumental debridement

befor

after

befor

after

befor

after

Autolytic debridement

The use of the body,s endogenous enzymes to digest necrotic tissue with a moisture-retentive dressing.

Wound fluid trapped beneath the dressing :

Softens and liquefies necrotic tissue
Contains growth factors and inflammatory cells

Biologic debridement

Debridement using live maggots

- Larvae release enzymes that degrade / liquefy necrotic tissue
- Larvae ingest necrotic tissue and bacteria
- Contraindications: psychological stress and pain

Surgical debridement

Refers to the use of scalpels, scissors, or lasers in a sterile environment by a physician to remove nonviable tissue from the wound

- Reduced risk of infection
- Allows for extensive exploration
- Can be stressful and costly

Mechanical debridement

Use of force to remove devitalized tissue, foreign material, and debris.
Nonselective debridement

- ✓ Wet-to-dry dressings
- ✓ Scrubbing
- ✓ Wound cleansing
- ✓ Wound irrigation
- ✓ Whirpool
- ✓ Pulsatile lavage
- ✓ Negative Pressure Wound Therapy (NPWT)

Variations in neonatal skin

Deficient in collagen Dermal instability

Underdevelopment of the Stratum Corneum

Decreased cohesion between Epidermis and Dermis

Dermis of the newborn is only 60% as thick as adult dermis

Neonates may also have excessive evaporative heat and fluid losses

Increased susceptibility to infection, toxicity from topically substances

The greatest risk factor for Pressure Ulcers

between hospitalized neonates
is the belief on the part of health professionals,

that the PUs are not a problem in neonates

Pressure Ulcer are a NEVER-EVENT

Hospital acquired pressure ulcers (HAPU) have been classified as a NEVER-EVENT

Never-Events are hospital associated problems that occur in the hospital/institutional setting that can be prevented

Never-Events will not be reimbursed by insurance companies

Worse, Never-Events must be reported

Hospital Acquired pressure injuries may not be covered, the hospital will have to absorb the cost of these injuries

PU in neonates

Among neonates and children, more than 50% of pressure ulcers are related to equipment and devices.

Frequent skin assessments under blood pressure cuffs, transcutaneous oxygen pressure probes, tracheostomy plates, nasal prong and mask CPAP, arm boards, plaster casts, and traction boots are important preventive measures.

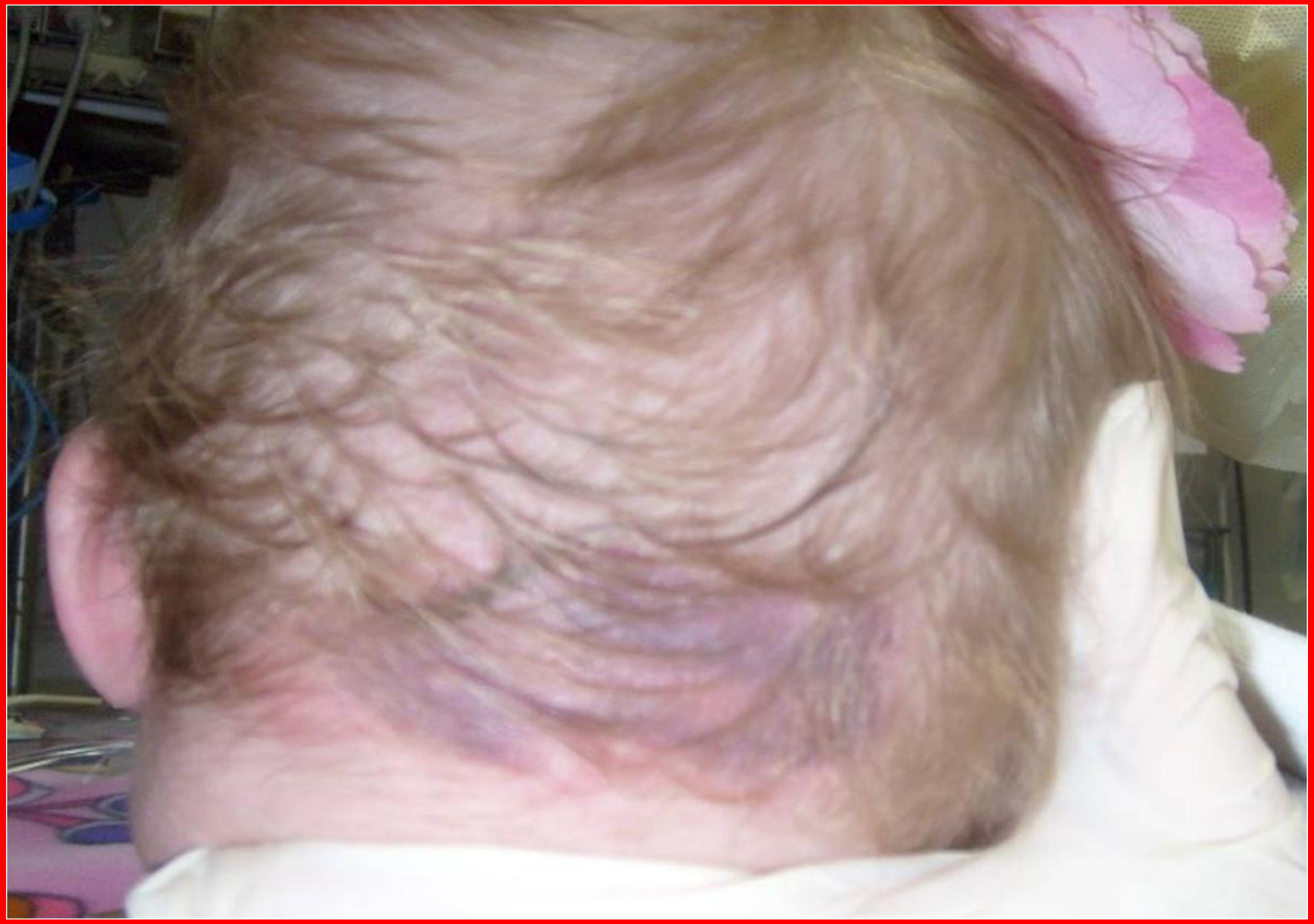
Beds, cribs, and isolettes must be inspected to ensure that tubing, leads, toys, and syringe caps are not under or on top of patient's skin.

The skin around nasogastric and orogastric tubes, head dressings, and hats should be assessed for pressure damage.

NCPAP

- Irritation of nasal lining, recurrent sinus infections
- Nasal septum deviation, leading to obstruction of nasal passages
- Nasal cartilage necrosis leading to nasal collapse or stenosis
- Abrasion of the cartilage may alter shape of the nose

- Devices that can cause injury to nasal area, cheeks and forehead



PU Prevention Recommendations

- Risk assessment
- Skin assessment
- Minimize pressure
- Minimize friction and shear
- Manage incontinence/moisture
- Assessment and management of pain
- Manage of nutrition and hydration needs
- Provide patient and family members education

Wound Management Strategies

Relieve or minimize pressure

Assess wound for infection
and need for Debridement

Appropriate Dressing

Pain management

WOUND CLEANSING

Sterile water and normal saline are the most commonly recommended cleansing agents for pediatric wounds,with sterile water being preferred for neonates

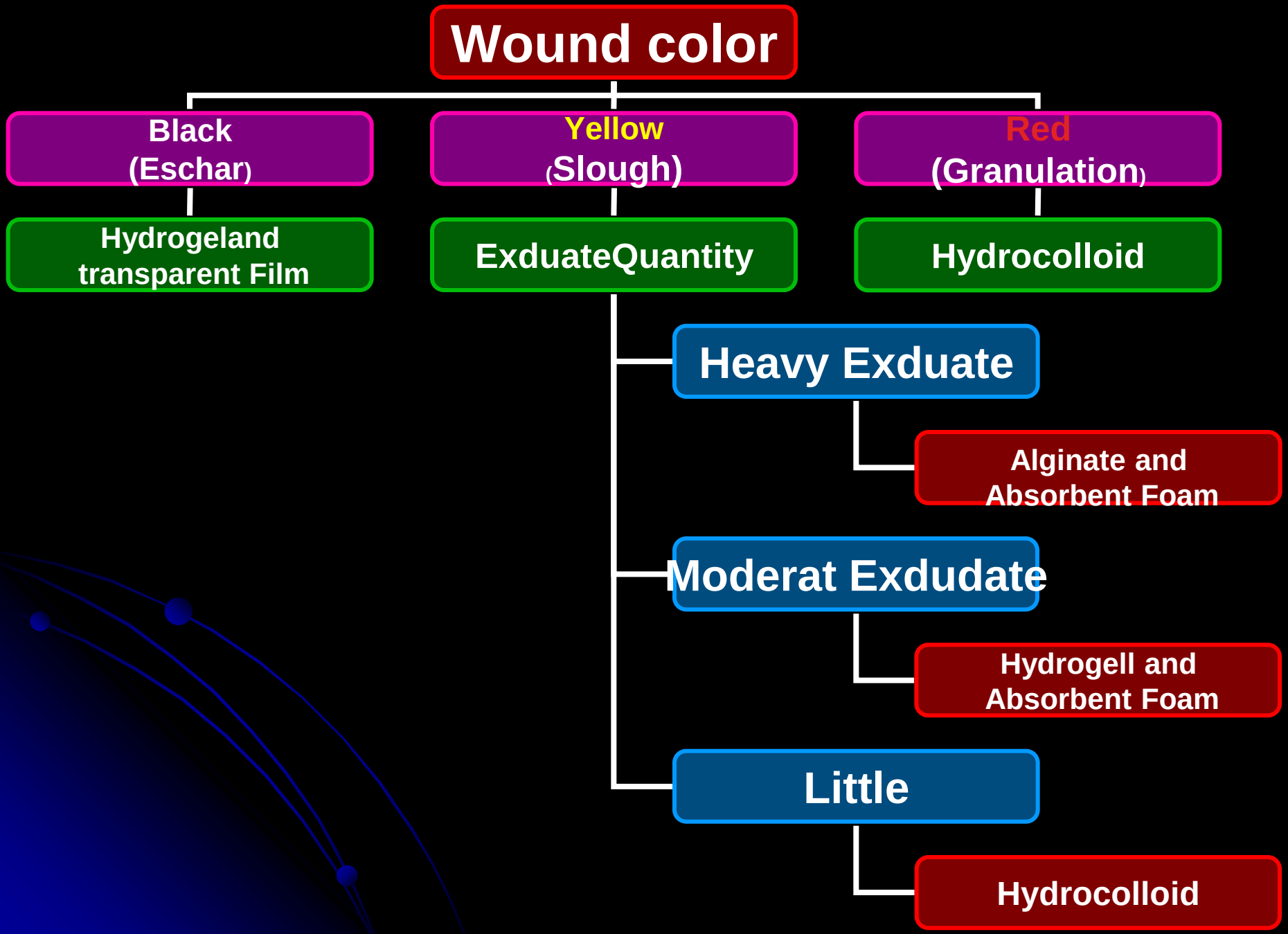
These cleansers should be warmed to body temperature for neonates, and normal saline should be diluted 1:1 with sterile water.Use of a 20-mL syringe with a blunt needle or a polytetrafluoroethylene(Teflon) catheter is recommended to gently flush away wound exudate

Type of dressing

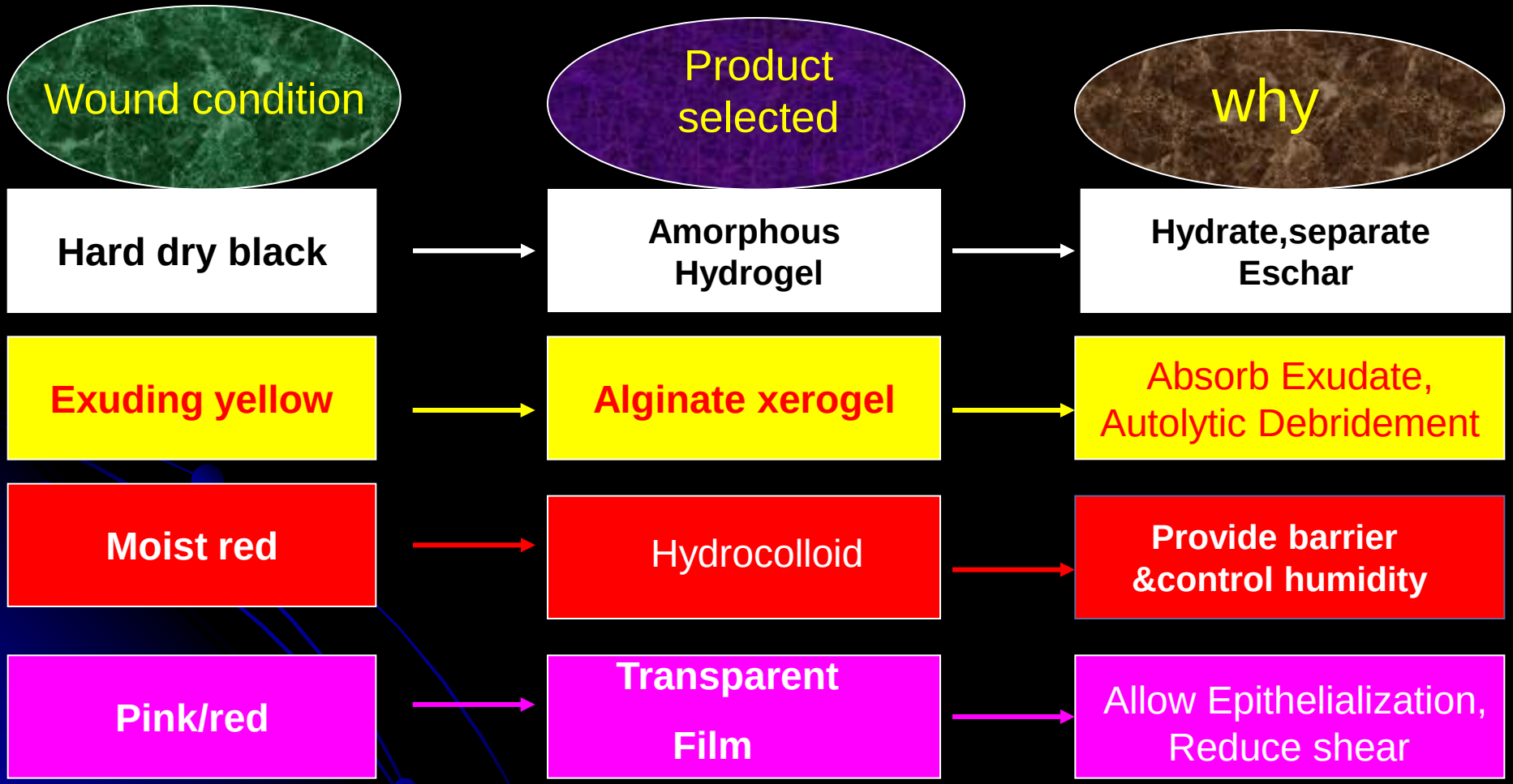
(foam, hydrocolloid, transparent films, Hydrogel, silicone)

How Dressings Interact in Wound Healing ?

- Help to debride
- Providing optimal moist environment
- Promoting granulation
- Promoting epithelialization
- Protecting from infection


Wound color
Black
(Eschar)
Yellow
(Slough)
Red
(Granulation)
Hydrogeland
transparent Film
ExduateQuantity
Hydrocolloid
Heavy Exduate
Alginate and
Absorbent Foam
Moderat Exdudate
Hydrogell and
Absorbent Foam
Little
Hydrocolloid

Selecting the correct dressing as the wound changes



Wound Manager

- Management and recommendations for treatment
- Monitor progress of management
- Discuss problems , EBP
- Education

and *documentation*


WITH THANKS