



Part B:
Educational Workshop for Unregulated Care
Providers: Assessment and Management
of Pressure Ulcers

Based on the Registered
Nurses' Association of Ontario
Best Practice Guideline:

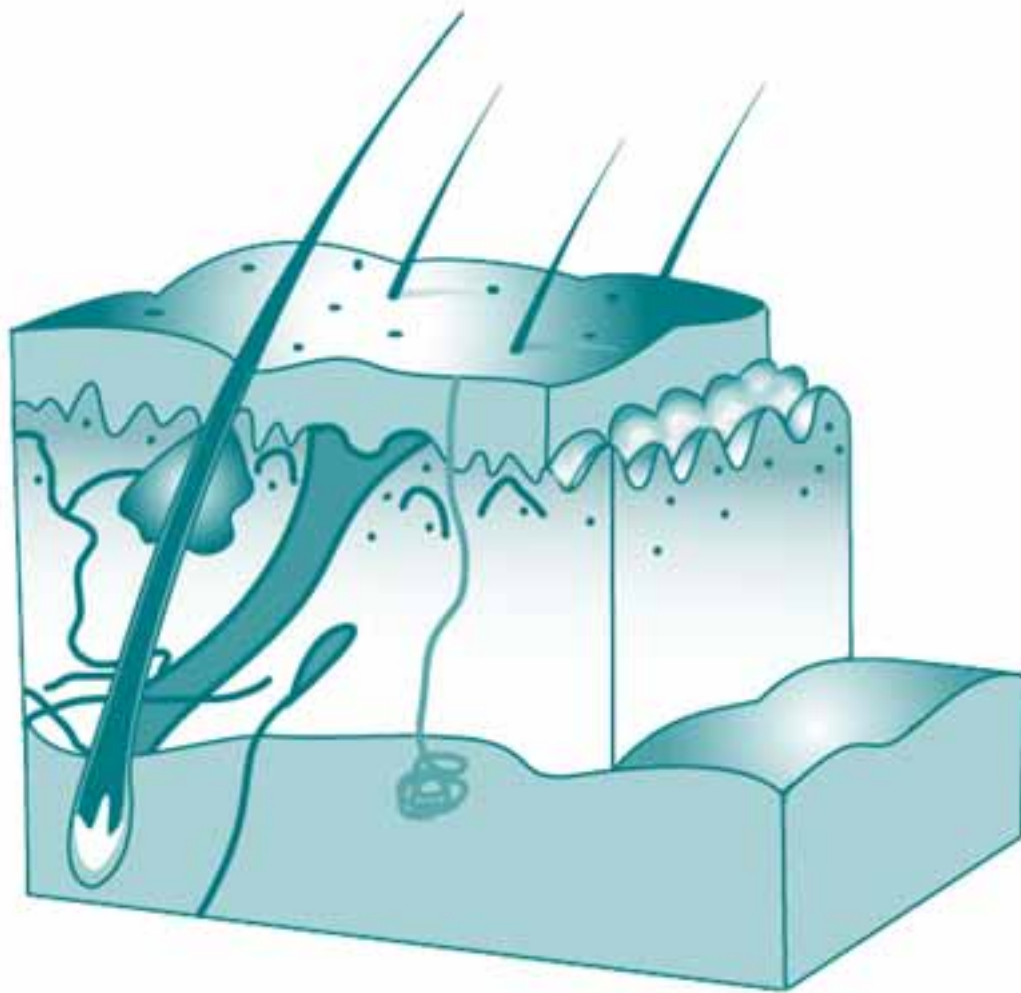
*Assessment and Management
of Stage I to IV Pressure Ulcers*

 **RNAO** Registered Nurses' Association of Ontario
L'Association des infirmières et infirmiers
autorisés de l'Ontario
NURSING BEST PRACTICE GUIDELINES PROGRAM

Anatomy and Physiology of the Skin

The Skin

- ▶ Defines us
 - ▶ Largest organ in the body
 - ▶ Weighs 3kg
- (Molony et al., 1999)



Anatomy and Physiology of the Skin

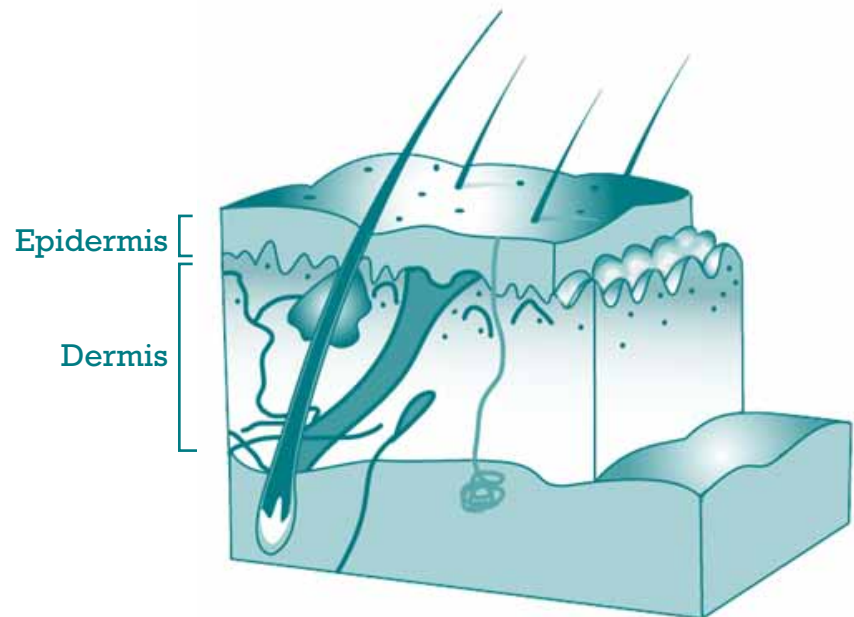
Two Layers of the Skin

Epidermis

- ▶ Outermost layer of the skin
- ▶ Stratified epithelium, contains no blood vessels, receives nourishment and oxygen by diffusion from the capillaries in the dermis
- ▶ Consists of 5 layers: horny layer, clear layer, granular layer, spiny layer, basal layer

Dermis

- ▶ Located below the epidermis
- ▶ Connective tissue of the dermis is composed of an interlocking meshwork of fibrous proteins and nonfibrous ground substance



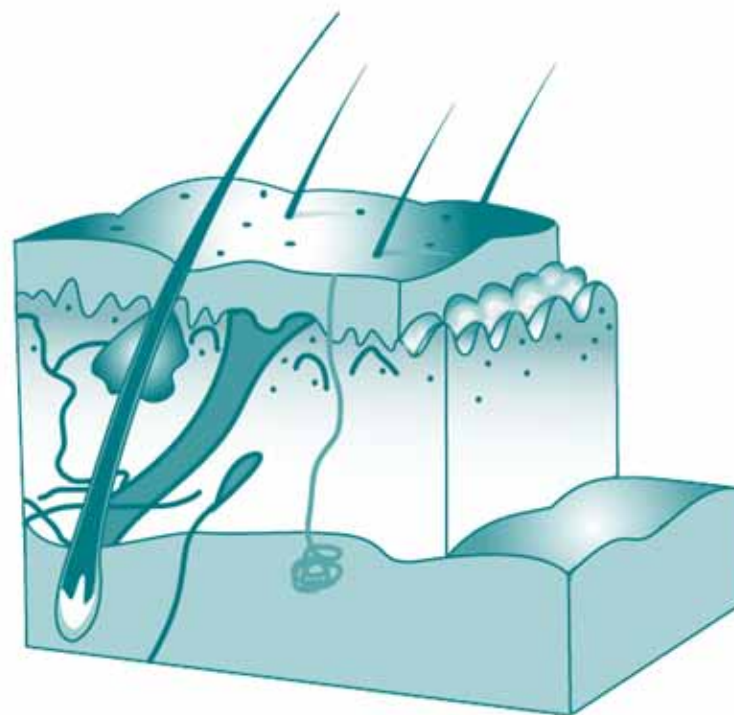
Anatomy and Physiology of the Skin

Subcutaneous Tissue

Composed of:

- ▶ Loose connective tissue
- ▶ Adipose tissue
- ▶ Elements of peripheral vasculature

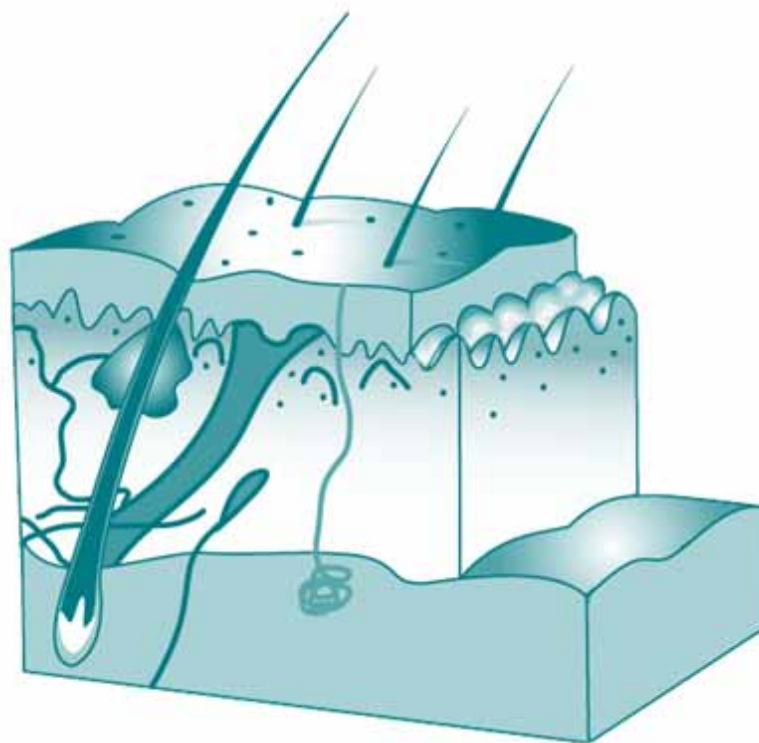
Subcutaneous Tissue



Anatomy and Physiology of the Skin

Six Functions of the Skin

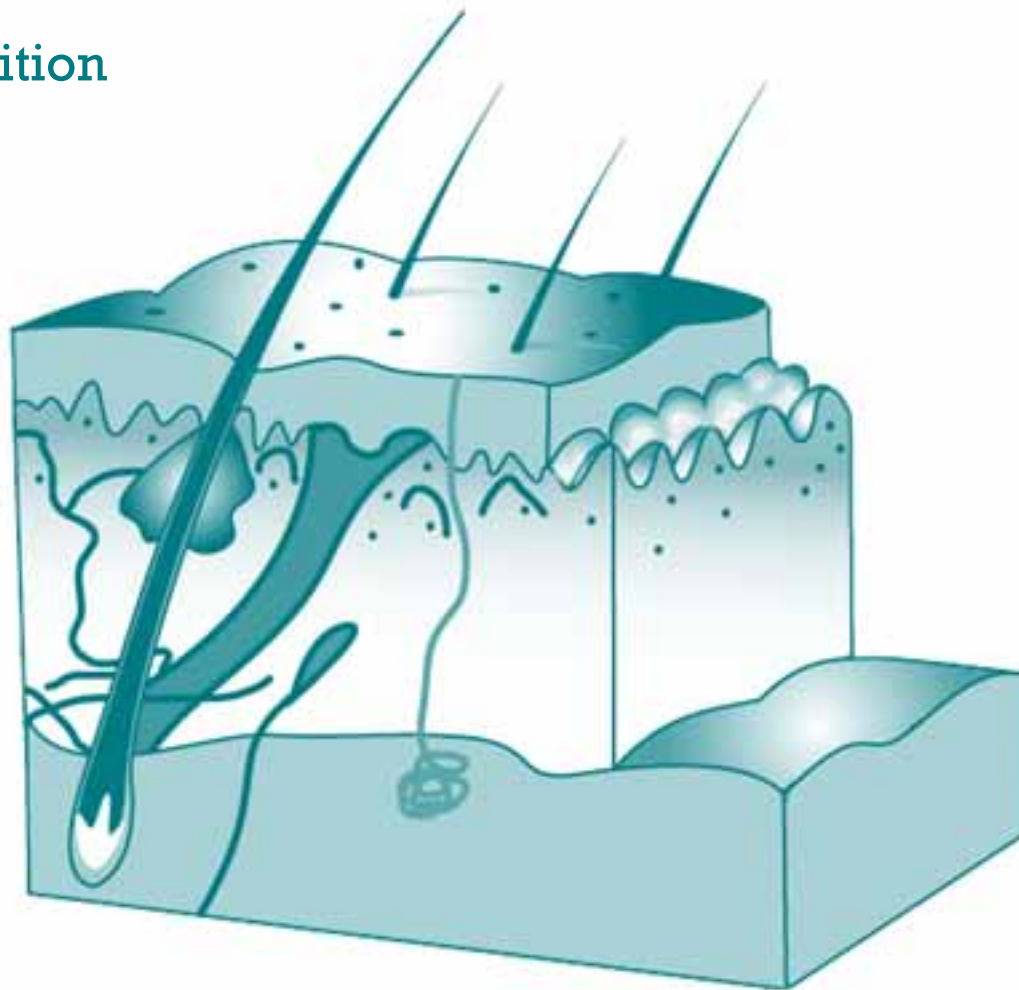
- ▶ Supports underlying body structures
 - ▶ Maintains thermoregulation
 - ▶ Source of sensation
 - ▶ Eliminates waste
 - ▶ Protects
 - ▶ Synthesizes vitamin D
- (Molony et al., 1999)



Anatomy and Physiology of the Skin

Factors that Affect Skin Condition

- ▶ Dryness
- ▶ Age
- ▶ Nutrition
- ▶ Hydration
- ▶ Environment



Assessing Risk Factors for Developing Pressure Ulcers

Pressure Ulcer

Definition

- ▶ Any lesion caused by unrelieved pressure that results in damage to underlying tissue
- ▶ Usually occurs over a bony prominence
- ▶ Staged to classify the degree of tissue damage observed

Assessing Risk Factors for Developing Pressure Ulcers

Common Pressure Ulcer Sites

Supine Position

- ▶ heels, sacrum, elbows, scapulae, back of head

Lateral Position

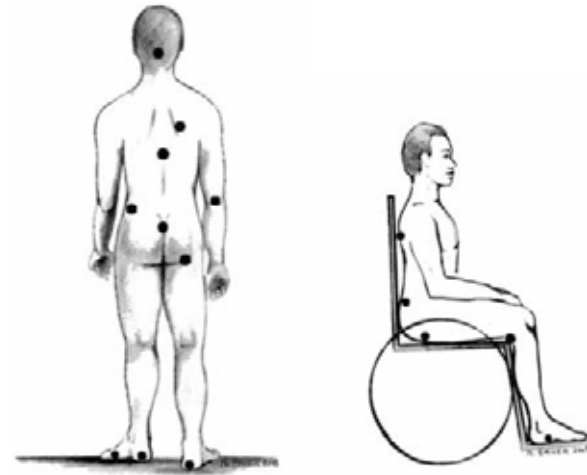
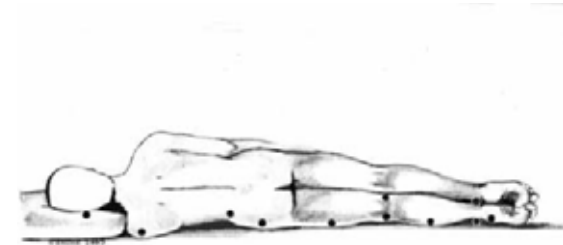
- ▶ malleolus, medial and lateral condyles, greater trochanter, ribs, acromion process, ear

Prone Position

- ▶ toes, knees, genitalia (men), breasts (women), acromion process, cheek and ear

Sitting Position

- ▶ elbow, sacrum, ischium



Illustrated by Nancy A. Bauer, BA, Bus Admin, RN, ET

Assessing Risk Factors for Developing Pressure Ulcers

Risk Factors

- ▶ Immobility
 - Weakness/drowsiness
 - Decreased muscle control/paralysis
 - Contractures
 - Restraints
- ▶ Decreased Sensation
 - Diseases ie. Stroke, Diabetes
- ▶ Medical Conditions
 - ie. Heart Disease, Diabetes
- ▶ Changes in Normal Skin Integrity
 - Decreased body fat
 - Decreased skin elasticity
 - Diminished circulation

Assessing Risk Factors for Developing Pressure Ulcers

Risk Factors, *cont'd*

- ▶ Psychological Factors
 - ie. Depression and cognitive impairment
- ▶ Poor Nutrition
 - Reduced intake of calories, vitamins, proteins and fluids
 - Increases risk for developing pressure ulcers and slows healing
- ▶ Excessive Moisture
 - Decreases tissue strength
 - Increases skin's susceptibility to infection
 - eg. Perspiration (heat/fever) and incontinence

Assessing Risk Factors for Developing Pressure Ulcers

Risk factors, *cont'd*

- ▶ Lack of Knowledge
 - Risk factors, eg. role of nutrition
 - Strategies for prevention/management
 - eg. turning, using pressure reducing/relieving surfaces

Assessing Risk Factors for Developing Pressure Ulcers

Contributing Factors

Pressure

- ▶ Force per unit area that acts perpendicularly between the body and the support surface
- ▶ Affected by the stiffness of the support surface, the composition of the body tissue and the geometry of the body being supported

Friction

- ▶ Mechanical force exerted when the skin is dragged across a coarse surface such as bed linens
 - eg. Clothing, sheets and poor fitting splints

Assessing Risk Factors for Developing Pressure Ulcers

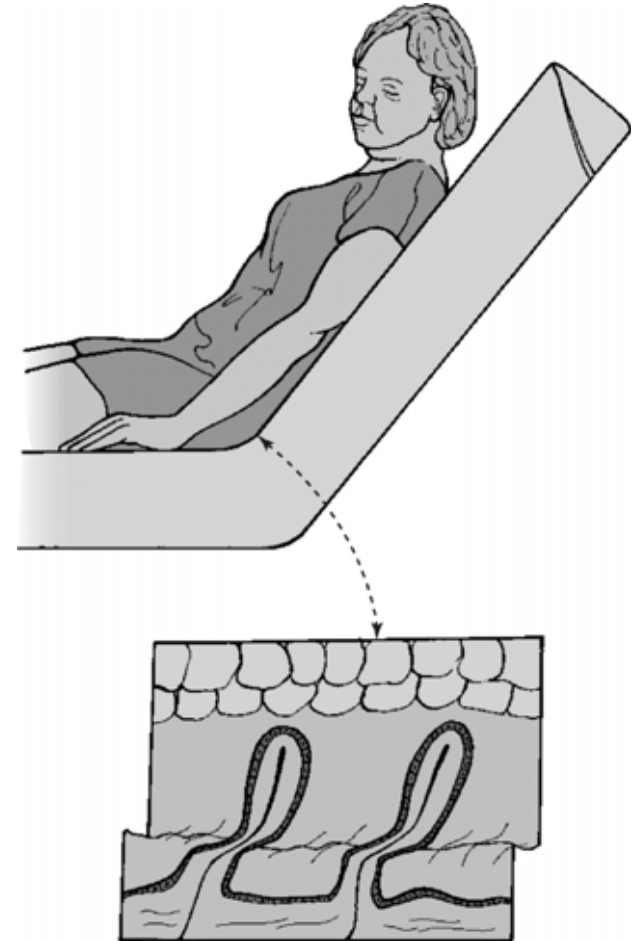
Contributing Factors, *cont'd*

Shear

- ▶ Mechanical force that acts on a unit area of skin in a direction parallel to the body surface
- ▶ Affected by the amount of pressure exerted, the coefficient of friction between the material contacting each other and the extent to which the body makes contact with the support surface
- ▶ Sliding, eg. bed/chair
- ▶ Improper lifting technique, eg. lifting with one person, dragging

Temperature

- ▶ Hot temperatures
- ▶ Inappropriate clothing and mattresses



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Pressure Ulcer Prevention and Management

Prevention and Management

Assess Skin Integrity

- ▶ Changes in colour and quality, eg. non-blanchable redness
- ▶ Breaks in skin, eg. skin tears or cuts
- ▶ Moisture and dryness
- ▶ Notify nurse in charge of changes

Moisture

- ▶ Hygiene (bathe with mild soap, rinse and dry thoroughly)
- ▶ Keep skin clean and dry, ie. body wastes, perspiration and wound drainage
- ▶ Keep linen dry and wrinkle free

Pressure Ulcer Prevention and Management

Prevention and Management, *cont'd*

Dryness

- ▶ Moisturize skin (lotion)
- ▶ Avoid massaging bony prominences

Pressure

- ▶ Turn Q2H
- ▶ Use positioning devices
- ▶ Avoid using donuts, eggcrate mattresses and sheepskin
- ▶ Ask for assistance lifting/transferring
- ▶ If redness present turn more frequently

Pressure Ulcer Prevention and Management

Prevention and Management, *cont'd*

Friction

- ▶ Decrease HOB, = 30° (reduce sliding)
- ▶ Limit time HOB @ 90°

Shear

- ▶ Decrease HOB (reduce sliding)
- ▶ Lift residents during transfers (avoid sliding or dragging)
- ▶ Use assistive devices (ie. Trapeze)
- ▶ Ask for assistance lifting/transferring

Pressure Ulcer Prevention and Management

Prevention and Management, *cont'd*

Nutrition

- ▶ Observe for poor/changes in appetite and fluid intake
- ▶ Observe for decreased intake, ie. less than 2/3 of meal tray
- ▶ Monitor weight
- ▶ Notify nurse in charge of changes

Pressure Ulcer Prevention and Management

Prevention and Management, *cont'd*

Immobility

- ▶ Positioning (avoid pressure points)
- ▶ Positioning devices, ie. pillow and wedges
- ▶ Turning schedules (turn Q2H)
- ▶ ROM, mobility and ambulation

Decreased Sensory Perception

- ▶ High density foam mattress
- ▶ Avoid hot water

Pressure Ulcer Prevention and Management

Special Considerations

Physical

- ▶ Heels – prevent patient heels from resting/
rubbing against the bed
 - Proper transferring
 - Pillows

Quality of Life

- ▶ How do pressure ulcers affect the patient's
quality of life?
- ▶ Ask patient to describe his/her current health
status
- ▶ Ask patient how the pressure ulcer impacts on
his/her day to day living

A Multidisciplinary Approach to Pressure Ulcer Care

Role of Interdisciplinary Team

Dietitian

Consultation

- ▶ Evaluation intake/output
- ▶ Make nutritional recommendations

Occupational Therapy/Physiotherapy

Consultation

- ▶ Support surfaces for seating
- ▶ Positioning devices
- ▶ Promoting mobility

Social Work

Consultation

- ▶ Apply for high intensity needs
- ▶ Quality of life

A Multidisciplinary Approach to Pressure Ulcer Care

Role of the Nurse

- ▶ Ongoing assessment, care planning and evaluation
- ▶ Provide clinical support to the staff at the unit level
- ▶ **Reinforce best practices amongst staff**

A Multidisciplinary Approach to Pressure Ulcer Care

Involvement of Physicians and Surgeons

- ▶ General Practitioners
- ▶ Geriatricians
- ▶ Dermatologists
- ▶ Plastic Surgeons
- ▶ Vascular Surgeons

A Multidisciplinary Approach to Pressure Ulcer Care

Your Role

- ▶ Assessing skin integrity
- ▶ Monitoring for risk factors
- ▶ Identifying contributing factors
- ▶ Implementing strategies for pressure ulcer management
- ▶ Communication with the team when changes occur

Assessment and Management of Pressure Ulcers

References

Molony, S., Waszynski, C. & Lyder, C. (Eds.) (1999). Gerontological Nursing: An Advanced Practice Approach. New York: Appleton and Lange.