

Bariatrics: Pressure Injury and Wound Care Considerations



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CEU Survey	Barlanice Pressure Injury and Wound Care Con
Survey completed, thanks for your contribution.	How would you rate this course?

dr

2 weeks (10/20/23) to complete survey and download CE certificate



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Disclosure

Much of the information presented is from:

- National Pressure Injury Advisory Panel (NPIAP)
- Association for the Advancement of Wound Care (AAWC)
- Wound Ostomy Continence Nurse Society (WOCN)





Association for the Advancement of Wound Care*





Objectives

1)List at least 3 factors impacting skin issues of bariatric patients

2) Define the scope and problem of pressure injuries and wound care associated with obesity and bariatrics

3) Describe the solutions for choosing appropriate equipment to help care for the bariatric patient's skin



Managing the complex bariatric patient







Obesity: having a high proportion of body fat to lean tissue



Morbid Obesity

- A chronic disease
- Significantly increases risk of one or more obesity-related health conditions
- Significant physical disability or even death



(Dartford, 2006)



Bariatrics - Greek for weight

- Treatment of obesity
- The art and science of medical weight management







Weight (lb.) / [height (in)]² x 703 Calculation: [weight (lb.) / height (in) / height (in)] x 703

- > 25-29.9 BMI= Overweight
- 30 BMI= Obese
- 40 BMI= Morbidly obese





Growing





Economic Costs

\$150 billion Direct costs \$142 billion

- Heart disease \$8.8 billion
- Osteoarthritis \$5.3 billion
 Indirect costs \$8.65 billion
 - 39.3 million workdays lost
 - 239 million restricted activity days

https://www.americashealthrankings.org/explore/annual/measure/Obesity/state/ALL



Obesity related health conditions

- "Twin Epidemics" Diabetes & Hypertension
- Atherosclerosis
- Exercise/activity intolerance
 - Exercise-induced asthma
- Malnutrition
- Psychological factors
 - Depression
 - Social isolation
- Complications with pregnancy & surgery



Surgical Complications

- Respiratory insufficiency
- Pneumonia
- Obesity Hypoventilation Syndrome
- Sleep apnea
- Wound dehiscence
- Lymphedema/ cellulitis
- Decreased wound healing rates
- Surgical infections



Incision Complications

Dehiscence





Tension on wound edges Reduced micro perfusion Emotional stress







Prevention

Maintain tissue perfusion

- Reduce pain & anxiety
- Incentive spirometry
- Nutritional supplements
 - 1.25 1.5g/kg of body wt. per day







Skin Issues Aggravated by Obesity

- Reduced tissue perfusion
- Lymphedema
- Compromised moisture barrier
 - Trans-Epidermal Water Loss (TEWL) <u>https://www.karger.com/Article/FullText/464338</u>
 - Lipid release
 - Friction
- Chronic inflammation
- Thinning of skin
- Skin Folds
- MASD (Moisture Associated Skin Damage)







Anatomy of Human Skin



Moisture Associated Skin Damage (MASD)

Damage to the skin secondary to persistent exposure to moisture in the affected area (NPIAP)

3 mechanisms of MASD

- Moisture makes skin more permeable & increases PH
- Fecal (or urine, sweat, wound drainage, saliva, mucus) enzymes:
 - Cause inflammation
 - More damaging if feces and urine mix
- Increased friction in presence of moisture = increased risk of skin damage





MASD

AKA: Diaper/napkin/nappy dermatitis Irritant dermatitis Inflammatory dermatitis Moisture lesions Perineal dermatitis Perineal rash Diaper rash (IAD)

Excoriation-per erosion caused by mechanica means Denuded skin – epidermal loss caused by prolonged moisture & friction

Darker Skin:

May present with skin that is darker, paler, purple, dark red or yellow





MASD - 4 categories

- Incontinence-associated dermatitis (IAD-mild, moderate, severe)
- Periwound (exudate), peri-tube/drain, and peri-fistula moisture-associated dermatitis
- Peristomal moisture-associated dermatitis (ostomy effluent)
- Intertriginous dermatitis (intertrigo)- skin folds





Skin Folds



Unusually deep Atypical areas Neck Arms **Breasts** Abdomen Legs **Ankles**



Skin Folds

Moist skin

- Increased body mass > more heat > more sweat
- Ratio of skin surface to internal mass decreases > difficult to cool body









Intertrigo





Candidiasis

Itchy, burning patchy redness with small, round pustules or papules

Fungal infection cause by yeast (Candida albicans)

• 2% miconazole







Prevent MASD – Intertrigo

- Use a long-handled mirror for daily inspection of high-risk areas: axilla, breasts, pannus and groin
- Remove irritants from the skin (too tight clothes)
- Maximize skin's intrinsic moisture barrier function
- Protect skin from further exposure to irritants
- Use devices to control or divert sources of excessive moisture, e.g., wound exudate, perspiration, urine and/or feces
- Use products that wick moisture away from 'at-risk' skin
- Treat all secondary infections (bacterial and fungal)
- Initiate prevention strategies to reduce or eliminate skin-onskin contact and friction



ICD-10 codes for MASD/IAD





Treat MASD-Intertrigo

Cleanse, Moisturize, Protect: Use

- PH balanced cleaners (4-7) with gentle surfactants- protect skin's lipid profile (phospholipids)
- It is particularly important for obese patients to select products with a pH value of 4–7 because the skin of the obese is especially dryer, more prone to cracking and recovers more slowly from damage caused by alkalinity
- No rinse formulas- reduce friction
- Emollients- retain moisture in stratum corneum (rehydrate corneocytes)prevent TEWL
- Barrier films (reduce the friction between skin folds)
 - If no signs of increased bacterial load are present

Use assistive devices, such as hand-held showerheads





ting Barrier Film



avilon



Prevent & Treat

Keep skin clean & dry

- Gentle soap
- No-rinse cleanser
- Apply antifungal powder, cream, or ointment locally
 - 2% miconazole if there's a yeast infection
- Oral antifungal medication, PRN
- Use 100% knitted polyester textile impregnated with an antimicrobial silver complex



Inspect the skin inside skin folds



Obese and Incontinent

Comprehensive protocols:

- Hands-on care must inspect skin down to base of folds
- Encompass bathing, toileting, skin fold management, odor, and genital care
- Use of a moisture barrier with a petrolatum, dimethicone or zinc oxide base
- Tucking dry gauze or washcloths into the skin folds may help reduce moisture





Acanthosis Nigricans

Hyperpigmented, thickened, velvety textured macules/patches (It's not dirt!)

Cutaneous marker for systemic disease: Diabetes – gradual onset

- Insulin resistance > insulin "spillover" into the skin
 - Control blood sugar

Cancer- rapid and sudden





Acanthosis Nigricans

- May be asymptomatic or itchy
- Check axilla, groin, back of neck
- Treatment
 - Weight loss and exercise (if the lesions are caused by hyperinsulinemia)
 - Topical treatment includes:
 - Antibiotics, retinoids and keratolytics
 - Ammonium lactate (lactic acid) cream









Chafing

Red with edema> bleeding and pain

- Check skin-to-skin contact- inner thighs, axilla, skin folds, under breasts, nipples
 - Keep areas clean and dry
 - Advise moisture wicking fabrics
 - Moisture barrier ointments or sealants (saline will burn)





Skin Tags

Pedunculated, flesh-colored lesions with smooth or irregular surfaces





- Asymptomatic skin tags no treatment
- Remove scissors, electrodesiccation or cryotherapy
- Most commonly removed for cosmetic reasons
- Do not regress with weight loss



Hyperkeratosis



Physiologic response to mechanical trauma



Treatment

- Weight Loss
- Orthotic shoe inserts
- Skin softening agents
 - Ammonium lactate
 - Urea





Cellulitis and Lymphedema

Cellulitis



Acute & quickly spreading

Treatment

- Leg elevation
- Bedrest
- Antibiotics
- Good skin hygiene
- Treatment of any open wounds
 - Wound debridement if the infection is extensive & deep

Lymphedema



- Reduces local blood flow, tissue oxygenation & wound healing
- Impaired lymphatic vessels, unable to pump the protein-rich, pooled lymphatic fluid into circulation > edema





Pressure Injuries



- Immobility
- Poor blood supply to fatty tissue
- Pressure injuries usually occur over bony prominences- skin folds
- Too small beds and wheelchairs
- Meticulous skin care
- Medical device related pressure injury
- Occipital area and heels
- Appropriate use of support surfaces
- Pressure injury risk assessment



Pressure Injury Prevention

Medical devices

- Monitor sites frequently
- Immediately address any reddened or irritated areas
- Obtain bariatric trach ties, bed pans, catheters
- Keep tubings where you can see them



Examples of medical devices associated with pressure injuries

- Feeding tubes, oxygen delivery tubes
- Intravenous catheters, Foley catheters
- Orthopedic devices
- Restraints
- Negative pressure wound therapy
- Bedpans
- Abdominal binders
- ID bands
- Braces
 Casts



Pressure Injury Prevention Protocol

Turn & reposition schedule based on individual need

- Select positioning devices with care
- Bed and chair
- Monitor HOB
- Early and often mobilization



2019 NPIAP Guidelines gives these additional reminders

- Consider use of a prophylactic dressing
- Consider use of friction/shear reducing linens, bed linens and gowns
- Monitor adequate hydration and nutrition
- Keep skin clean and dry but moisturize
- Use moisturizers containing lots of water & a humectant (substance that binds water to the skin); Humectants include glycerol, glycerin, beta-glucan 1-3 and hyalurionic



Treatment Protocols

Turning and Positioning

- Avoid positioning on pressure injury sites
- Avoid positioning devices that create heat
- May need to reposition and/or turn move frequently

Dressings

- Often curl when used -monitor & replace PRN
- Moisture may prevent adherence
- Avoid tape when possible
- Use bariatric sized









Prevention Protocol



Remember we should always use specialist equipment to prevent manual handling injuries



Bariatric Assessment





 \checkmark Assess the patient's ability to assist due to medical reasons, fatigue, medications, etc.

- \checkmark Discuss the task with the patient
- \checkmark Ensure that the patient is medically stable for the activity

 \checkmark If the patient has weight bearing capability, determine the stronger side to transfer to

 \checkmark Assess patient's level of assistance

- Independent: Patient performs task safely, with or without staff assistance, with or without assistive devices
- Partial Assist: Patient requires no more help than stand by, cueing, or coaxing, or caregiver is required to lift no more than 35 pounds of the patient's weight
- Dependent: Patient requires nurse or caregiver to lift more than 35 pounds of the patient's weight or is unpredictable in the amount of assistance offered. In this case assistive devices should be used.
- ✓ Determine patient's weight-bearing capacity, upper extremity strength level of comprehension/cooperation of the task, height/weight and conditions that may affect the task, like joint replacement, respiratory/cardiac compromise history of falls and more





Bed Considerations

- Bed- widths from 39"-60" wide
- 600-1000 lb. limits
- Auto-Contour- Decrease friction/shear
- Trendelenburg/Reverse
- Built-in scales
- Cardiac chair positioning





Support Surface Considerations

Powered Active or Reactive Bed Support Surface:

- Turn Assist
- Alternation (with auto-return)
- Microclimate control
- Shear/Friction reduction
- Firm perimeter support for easy and safe bed ingress/ingress
- Seat inflate or Fowler
- Lateral Rotation
- Auto firm







AutoFrim

Rapid hyper-inflation of the air cells or baffles









Wheelchairs Considerations

We don't call them BED sores anymore for a reason!

- Properly sized for patient/resident
 - Solid seat pan
 - ELRs
 - Center of gravity over rear wheels
- Sides should not bind
- Adjustable parts properly padded with no sharp edges
- Seat cushions specific for patient, properly fitted, prescribed by a professional and reevaluated Q6 months.







Transfers and Repositioning

- Mechanical/Electric lifts
 - •Freestanding, A Frame, Ceiling
 - •Repositioning and limb slings
- •Overhead trapeze, bed ladders
- •Air assisted devices- Hovermat, Air Transfer Device (Sizewize)
- •Friction reduction devices- coated turn sheets
- •Barton transfer chair





Bariatric Equipment

Therapeutic safe patient handling **Maintain:**

- Skin integrity
- Patient and clinician safety
- Bariatric patient dignity

Reduce:

- Pulmonary complications
- Falls, injuries to patients and caregivers during lifting and transporting



Case Study

A nurse's aide overheard Mrs. B, a patient on the unit, speaking to an attorney on the phone about the pain she was having with her pressure injuries. A flash was seen coming from the room and then it was noted Mrs. B's sister was taking a photograph of Mrs. B's buttocks with her cell phone.

Mrs. B: 62-year-old woman. 64", 403 lbs.

Admitted to SNF after 1 week stay in hospital for pneumonia

Medical hx significant for: 2 diabetes mellitus (T2DM) with prescribed oral medications, gastroesophageal reflux disease (GERD), Venous ulcers LEs



Case Study SNF Admission & Assessment

- Placed in regular bed. Because of her severe dyspnea, her preferred position in bed was HOB elevated 45 degrees
- Intertriginous dermatitis under both breasts & abdominal panniculus.
- Pillowcase beneath each breast; bath towel folded in the panniculus
- Undergarments wet with urine & incontinence-associated dermatitis (IAD), inflammation of the
- During stay:



- 02 saturations volatile
- She was difficult to move in bed and out of bed. She would flail her arms and become anxious with any movement. During one attempt to move her to the bedside chair, she slipped down to the floor and the skin on both forearms tore (Charted as DTI)



OBESE

O: Observe for atypical pressure injury development

B: Be knowledgeable about common skin conditions

E: <u>Eliminate</u> moisture on skin and in skin folds

S: be <u>Sensitive</u> to the patient's emotional distress

E: use Equipment to protect the skin and for safe patient handling

November, 2015: Wound Care Advisor, Providing skin care for bariatric patients; Gail R. Hebert, MS, RN CWCN, DWC, WCC, OMS



Thank you

Questions? Ideas for future discussions? Drive DeVilbiss Healthcare 877-224-0946 www.drivemedical.com

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