Today’s Webinar

- Pressure Injury Prevention webinar will begin at 2:00 PM
  - Reminder to please keep your lines muted to avoid background noise and echo during today’s presentation.

- Questions
  - Please use the chat box to ask questions throughout the presentation.
Today’s Speakers

- Denise Nix, MS, RN, CWOCN
- Kathy Borchert, MS, APRN, CNS, CWOCN, CFCN
Pressure Injury Prevention

Best practice update, differential diagnosis, and proning

Denise Nix
MS, RN, CWOCN

Kathy Borchert
MS, APRN, CNS, CWOCN, CFCN
Objectives

1. Review common best practice (BP) gaps and trends noted with pressure injury (PI) Adverse Health Event (AHE) reporting

2. Receive an overview of cutaneous lesions that may need to be included in the differential diagnosis of PI

3. Examine proning guidelines and principles outlined by the NPIAP and WOCN Society.

4. Discover various community protocols and techniques for PIP in the proned patient
Q3 AHE Data

- 50% - patients with reportable sacral/coccygeal PI declined q 2 hr repositioning
- 88% - received education, trouble shooting, small incremental turns
- 100% - received high specification mattress
- 0% - received provider notification
### BP Gap-PI Risk Assessments

#### Q3 AHE Data

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Level</th>
<th>Value</th>
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<tbody>
<tr>
<td>12.5%</td>
<td>Very High</td>
<td>6-9</td>
</tr>
<tr>
<td>31.2%</td>
<td>High</td>
<td>10-12</td>
</tr>
<tr>
<td>40.6%</td>
<td>Moderate</td>
<td>13-14</td>
</tr>
<tr>
<td>12.5%</td>
<td>Mild</td>
<td>15-18</td>
</tr>
<tr>
<td>3.1%</td>
<td>No Risk</td>
<td>18-23</td>
</tr>
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PI Risk Assessment: Common Misunderstandings

- 6 Braden risk factors are:
  - Only part of a comprehensive PI risk assessment
  - Helpful because they can be mitigated by nursing
  - Inclusive of risk factors for MDRPI

- Additional PI risk factors are important but not likely mitigated by nursing:
  - Vascular disease, diabetes
  - Extremes in age, BP, body temperature (arguably)

- Common underpredictions include:
  - Sensory perception, moisture, mobility, nutrition
Sensory Perception
Ability to respond to **PRESSURE RELATED** discomfort

1= Completely limited
   Unresponsive (does not moan, finch or grasp) to pain stimuli, due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body

2= Very limited
   Responds only to painful stimuli. Cannot communicate (PRESSURE RELATED) discomfort except by moaning or restlessness OR has a sensory impairment which limits ability to feel pain/discomfort over ½ of body

3= Slightly limited
   Responds to verbal commands, but cannot always communicate (PRESSURE RELATED) discomfort or the need to be turned OR has some sensory impairment which limits ability to feel pain/discomfort in 1-2 extremities

4= No impairment
   Responds to verbal commands, has no sensory deficit which would limit ability to feel or voice pain or discomfort

How do patients communicate pressure related pain?
- This strap is too tight!
- My heels are sore!

How are we taught to assess pain?

Care plan interventions needed for score ≤ 3. including MDRPI prevention

Source: Barbara Braden and Nancy Bergstrom. Copyright, 1988. Reprinted with permission. Permission should be sought to use this tool at www.bradenscale.com
Moisture
Degree to which skin is exposed to moisture

1= Constantly moist
   Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved and turned

2= Very moist
   Skin is often, but not always moist. Linen must be changed at least once a shift

3= Occasionally moist
   Skin is occasionally moist requiring an extra linen change approximately once a day

4= Rarely moist
   Skin is usually dry, linen only requires changing at routine intervals

- We tend to think about incontinence
- What about moist skin under and around medical devices and between skin folds from bodily secretions (saliva, mucous, perspiration)
Mobility
Ability to change and control body position

1= Completely immobile
   Does not make event slight changes in body or extremity position without assistance

2= Very limited
   Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently

3= Slightly limited
   Makes frequent though slight changes in body or extremity positions independently

4= No limitation
   Makes major and frequent changes in position without assistance

Can the patient demonstrate an independent side lying position without:

- dragging their skin against the bed?
- dislodging a medical device?
- lying on a tube, call light, or telephone?
65-74 year old admitted with severe septic shock and right leg cellulitis requiring I&D x 2.

- Acute respiratory failure, COPD, CHF, pneumonia, obstructive sleep apnea, on a ventilator
- Acute kidney injury, GI bleed with anemia, Diabetes, DM neuropathy, PVD
- Alert and oriented, morbid obesity, bedrest
- Incontinent bladder and bowel
PI Risk Assessment Case Study

| PI Risk assessment based on limited AHE report data |
|---------------------------------------------|------------------|
| Sensory perception                          | DM neuropathy, ventilator, ETT | 2-3 |
| Moisture                                    | incontinent bowel and bladder   | 2   |
| Activity                                    | bedrest, OR           | 1   |
| Mobility                                    | bedrest, OR x 2, severe morbid obesity | 2-3 |
| Nutrition                                   | morbid obesity, NPO    | 2   |
| Friction/Shear                              | severe resp distress, severe morbid obesity | 1-2 |
| TOTAL                                       | MODERATE TO HIGH RISK  | 10-13 |
AHE Report

What was the patient’s documented PI risk assessment score, at time of pressure injury development, based on facility risk assessment tool?
- Mild risk

Was the pressure ulcer risk assessment(s) completed prior to and within 72 hours of pressure injury development accurate?
- Yes

Is care plan linked to risk assessment subscales?
- N/A
Pressure Injuries vs Imposters

- Mechanical (e.g., Friction)?
- Moisture lesions (e.g., IAD, ITD)?
- Frost bite?
- Infectious lesions (e.g., Pilonidal cyst, HSV/HPV)?
- Inflammatory lesions?
- Vascular or thrombotic vasculopathy?
## COVID-19 Related Skin Manifestations

<table>
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<tr>
<th>Type</th>
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<th>Description</th>
<th>Covid-19 Related Findings</th>
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<td>Maculopapular</td>
<td>Morbilliform (resembles measles) Located.</td>
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<td><strong>Vascular or thrombotic vasculopathy abnormalities</strong></td>
<td>Chilblain-like</td>
<td>Localized <strong>swelling and discoloration</strong> typically on toes, heels and fingers</td>
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<td><strong>Petechia</strong> &lt; 2mm <strong>Purpura</strong> &gt; 2 mm (Often includes pain and pruritis)</td>
<td>Petechia less common. Retiform purpuric areas have been reported on sacral and thigh areas may include necrosis</td>
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<td>Livedoid</td>
<td>Reticular pattern (net-like, lace-like) mottled appearing discolorations and can be a transient or persistent</td>
<td>Uncommon. Have been reported on the trunk, forearms, thighs, hands, and feet.</td>
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DIFFERENTIATING COVID-19 CUTANEOUS LESIONS FROM DEEP TISSUE PRESSURE INJURY AND OTHER PURPLE LESIONS

PRESSURE INJURY PREVENTION IN THE PRONE PATIENT
Differential Diagnosis: “Purple” Lesions

Purpura = “Hemorrhage into the skin”

Differential is broad

- Deep Tissue Pressure Injury
- Blunt Force Trauma
- Skin Failure
- Chronic Tissue Injury
- Infectious
- Inflammatory
- Coagulation dysfunction
- Thrombocytopenia
- Vessel deposition disorders
- Etc...etc...

“Does NOT blanch with pressure”
Cause can range from innocuous to life-threatening
Differentiating other “purple” lesions

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.
- **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.*

_NPIAP Definition_
Differentiating other “purple” lesions

Blunt Force Trauma

Hx: Atrial Fibrillation
Medication list includes Coumadin
S/P Fall

Skin Failure
Death of the skin and underlying tissue due to poor blood circulation occurring in the context of multisystem organ failure.

Chronic Tissue Injury (CTI)

Purple-maroon discoloration with thinning of the epidermis, with or without open skin injury located on the fleshy portion of the buttocks and not necessarily over a bony prominence.

CTIs do not innately improve or deteriorate into partial or full-thickness injury.

*Mahoney, M., Rozenboom, BJ. JWOCN 2019; 46(3):187-191*
Differentiating other “purple” lesions

**Infectious**
- Ecchyma gangrenosum (*Pseudomonas*)
- Angioinvasive fungal infections

**Inflammatory**
- Vasculitis
- Chilblains (pernio)
- Leucocytoclasic vasculitis
Differentiating other “purple” lesions

**Coagulation dysfunction**
- Medications (warfarin, heparin)
- Platelet defects
- Antiphospholipid antibody syndrome

**Thrombocytopenia**
- Idiopathic thrombocytopenic purpura (ITP)
- Thrombotic thrombocytopenic purpura (TTP)

Disseminated intravascular coagulation (DIC)
China: Health officials investigating potential SARS outbreak December 31

Health officials investigating potential SARS outbreak in Wuhan (Hubei province) December 31; 27 people infected with viral pneumonia
TIMEFRAME expected from 12/31/2019, 12:00 AM until 1/1/2020, 11:59 PM (Asia/Shanghai)
COUNTRY/REGION Wuhan (Hubei)

Coronavirus confirmed as pandemic by World Health Organization

Coronavirus in the U.S.: Latest Map and Case Count

FDA NEWS RELEASE
FDA Takes Key Action in Fight Against COVID-19 By Issuing Emergency Use Authorization for First COVID-19 Vaccine
Action Follows Thorough Evaluation of Available Safety, Effectiveness, and Manufacturing Quality Information by FDA Career Scientists, Input from Independent Experts

For Immediate Release: December 11, 2020
COVID-19 AND THE SKIN

- Acral erythema with vesicles or pustules (pseudo-chilblain) – 19%
- Other vesicular eruptions – 9%
- Urticarial lesions – 19%
- Maculopapular eruptions – 47%
- Livedo or necrosis – 6%

COVID-19 AND THE SKIN

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- Other vesicular eruptions – 9%
- **Urticarial lesions – 19%**
  - Urticaria = hives
- Maculopapular eruptions – 47%
- Livedo or necrosis – 6%

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- Livedo or necrosis/ischemic – 6%

COVID-19 AND THE SKIN

Pernio (pseudo-chilblains)
- Feet/hands
- Hospitalized 16%

Vascular/urticarial/macular erythema/morbilliform
- Trunk/extremities
- Hospitalized 22-45%

Retiform purpura (livedoid/necrotic)
- Extremities/buttocks
- Hospitalized 100%

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Case Studies

1. Ear
2. Calf
3. Coccyx
Male, 60 years old
Admit 5/17/2020 and started on ECMO
Hospital acquired pressure injury 5/29/2020
Deep Tissue Pressure Injury
Evolved to Unstageable

RN Interviews:
- No device applied to ear (i.e. O2 sat probe)
- Z-Flo positioner for head, molded for ear

How???
Magro and colleagues\textsuperscript{5} reported on 5 cases with an exceptionally high proportion of aberrant coagulation in severe cases of critically ill adult patients with COVID-19. Their COVID-19 patients exhibited a hypercoagulable state, featuring prolonged prothrombin time, elevated levels of D-dimer and fibrinogen, and near normal activated partial thromboplastin time. Two patients progressed to overt disseminated intravascular coagulation (DIC). DIC has been described before; Tang et al.\textsuperscript{9} reported that 71.4\% of non-survivors and 0.6\% of survivors of COVID-19 showed evidence of overt DIC.

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<tr>
<td>SARS-CoV-2</td>
<td>Negative</td>
<td>Positive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D-Dimer</td>
<td>0-0.5 ug/ml</td>
<td>6.3</td>
<td>2.1</td>
<td>&gt;20.0</td>
<td>&gt;20.0</td>
<td>19.6</td>
<td>&gt;20.0</td>
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<tr>
<td>Fibrinogen</td>
<td>200-420 mg/dL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>732</td>
<td>638</td>
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<tr>
<td>Prothrombin</td>
<td>22-37 secs</td>
<td>None</td>
<td></td>
<td></td>
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D-dimer is predictive of serious illness and death due to SARS-CoV-2 infection, and thereby provides further support for the notion that point of care D-dimer testing might be a helpful tool for the early triaging of COVID-19 patients presenting to the hospital emergency department and for monitoring patients during the first week of hospital admission.

Diagnosis of intravascular coagulation and fibrinolysis, also known as disseminated intravascular coagulation, especially when combined with clinical information and other laboratory test data (eg, platelet count, assays of clottable fibrinogen and soluble fibrin monomer complex, and clotting time assays-prothrombin time and activated partial thromboplastin time)

Elevated D-dimer levels are found in association with disseminated intravascular coagulation (DIC), pulmonary embolism (PE), deep vein thrombosis (DVT), trauma, and bleeding. D-dimer may also be increased in association with pregnancy, liver disease, malignancy, inflammation, or a chronic hypercoagulable state

Purple areas on non-pressure loaded surfaces lack a pressure-shear etiology and should not be classified as pressure injuries. They may resemble purpura fulminans which is consistent with the histopathology noted above and has been reported in other systemic infections. They may also resemble other dermatological conditions associated with microvascular injury and thrombosis such as retiform purpura, livedo reticularis and cutaneous vasculitis.

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

Deeper soft tissue may also be damaged because of pressure-shear, particularly in the buttocks, sacrum and coccyx when positioned supine or on the face, knees, and other high-risk body parts when positioned prone. We would recommend that discolored areas on any body surface subjected to pressure loading or shear be palpated to detect differences in tissue consistency and temperature to rule out concomitant deep tissue pressure injury. Theoretically, the same COVID-19 related vascular changes may be occurring in underlying soft tissue (e.g., muscle), rendering those tissues less tolerant of the damaging effects of pressure and shear. The histological specimens presented in the above case studies show clotting. Histological specimens of deep tissue pressure injuries showed frank necrosis of skin, fat, and muscle. The histological appearance of Deep Tissue Pressure Injury (DTPI) is not the same as the COVID-19 skin changes.
What is the Etiology?

COVID-related Lesion...Retiform purpura
CASE #2

42 year old male
November, 2019- Heart Transplant
Readmissions: December, 2019 & February, 2020

Tricuspid valve vegetation
Admitted 3/2/2020, first COVID Test was 5/22/2020
No D-Dimer of PTT results during this time frame.

Patient developed unstageable sacral hospital acquired pressure injury in March and then this calf injury April 9th. DTPI evolved to unstageable 5/19/20.
WOC suspected this was a pressure injury from SCD tubing. Patient on low air loss mattress.

RCA RN Interviews: SCD tubing was never seen on this location.

RCA Results: No root cause.

Following review of NPIAP White Paper Skin Manifestations with COVID-19: The Purple Skin and Toes that you are seeing may not be Deep Tissue Pressure Injury it was speculated that this unexplained bruising that evolved to a full-thickness wound was most likely a COVID complication.
CASE #3

63 y.o male admitted 3/10/2021

COVID outbreak at work

Patient’s boss called him at home, no answer. He went to the patient’s home, no answer at the door. He called the police, who broke into the house. Patient found asleep on his couch, confused.

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<td>8.6</td>
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**COVID-related**

- Non-inflammatory to pauci-inflammatory thrombi

**Deep tissue pressure injury**

- Blood vessel swelling, hemorrhage, cell death
- Usually, NO thrombi

- Engorgement
- Hemorrhage
- Edema
- Necrosis


PRONE Pressure Injury Prevention

WHAT IS BEST PRACTICE?

- Per WOCN
- Per NPIAP
- MHA Toolkit

M Health Fairview:

- Guideline Review
- Order Set Orders
- Informal Community Standard results
WOCN COVID-19 Resource Page

- COVID-19 Forum
- COVID-19 Image Library (not specific to COVID)
- **The COVID-19 Skin Manifestations: A Guide for WOC Nursing Practice**
- Maintaining skin health from masks
- Wound Assessment and Photo documentation in isolation
- *JWOCN* COVID-19 Resources
- Legislative & Administrative Actions
- ANA Resource Center and Free Webinars
- COVID-19 Recovery Package for Nurses
- Hyperlink to the NDNQI Resources
- United Ostomy Association Resources
- Lippincott Nursing Center
- Wolters Kluwer COVID-19 Resources and Tools
- Industry Resources
- Homeless During the Pandemic: What to do and how to help
With the rise of Covid-19 cases, we are proning now more than ever....

Pressure injury prevention in the proned patient
Supine vs. Prone Prevention

- Most Common pressure injury location in the Supine Patient
  - Sacrum/coccyx...mattress, positioning, anti-shear dressing
  - Heels...suspending off mattress/footrest of chair

- Most Common pressure injury location in the Prone Patient?
  - Under medical devices on the face/neck
Unique Concerns – INTERNAL Devices

Courtesy of WOC at a MN Hospital
Note bullet #6
**Order Set Example**

<table>
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<tr>
<th>Specialty bed: Low Air Loss [NUR165]</th>
<th>Until discontinued, Starting S, ensure no wrinkles in linens</th>
</tr>
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</table>

**NURSING INTERVENTIONS [304106xxx]**

| Skin care [NUR415] | Routine, Starting S, Until discontinued  
Comments:  
1. Prior to proning assess anterior skin surface and apply silicone foam dressing to prominent bony prominences, change every 5 days.  
2. Use TAP wedges to maintain sidelying prone position, turn every 2 hours.  
3. Use Z-flo positioner under head and chest. Mold at areas of medical devices and chin.  
4. Position pillows to suspend toes off the mattress. OK to use off-loading boots when supine. |

| Medical Device Pressure Injury Prevention [NUR165] | Routine, Starting S, Until discontinued  
Comments:  
1. Ensure that all lines, tube and drains are checked prior to prone/supine positioning to ensure without tension.  
2. Pad under devices on torso.  
3. Remove Stat-lock before proning and secure Foley to posterior thigh without tension. |

| ECG leads: Reposition to back while prone and to front when supine [NUR165] | Routine, Starting S, Until discontinued |

| ETT position management [NUR165] | Routine, Starting S, Until discontinued, If ETAD stabilizer used, ensure ETT positioned to the side the head is facing. |

| Secretion management by nursing [NUR165] | Routine, Starting S, Until discontinued, Suction patient down ETT, orally and above ETT cuff prior to prone and supine turning. |

| Nasal bridle [NUR165] | Once, Place Nasal Bridle to secure any small or large bore nasal tubes. Ensure the tube is secured ½-1” below the nare. |
**Guideline Example**

**Procedure:**

I. PREPARATION FOR PRONING:
   A. Gather Supplies
      1. Low air loss mattress
      2. Ceiling lift and repositioning sheet (2)
      3. Pillows for extremities and under abdomen (5)
      4. Repositioning wedges or pillows (to maintain side lying position)
      5. Gel positioners (under head and chest)
      6. Incontinence /dry flow pad
      7. EKG pads
      8. Catheter stabilizer
   B. Body/Skin Prep:
      1. Provide eye care as ordered
      2. Change any dressings on the anterior body if needed prior to manual prone
      3. Ensure tongue is in mouth – use bite block if needed for protruding tongue to prevent biting on tongue.
   C. ETT Tube/Oxygenation Prep:
      1. Pre-oxygenate the patient with 100% FIO2 for 30 minutes prior to planned prone
      2. RT: Ensure endotracheal tube securement is properly positioned (plastic of ETAD not on zygomatic bone)
      3. If a tracheotomy is in place, ensure that it is secured
      4. Write ETT position on white board
   D. Lines/Tubes/Drain Prep:
      1. Turn off gastric feeding tube 1 hour prior to turning – post pyloric feeding may continue through prone positioning.
      2. Secure feeding tube if present
      3. Ensure **NO** IV caps, lines, or tubes are under the patient’s skin after each reposition
      4. Ensure the lines (central, pulmonary or arterial catheters) are secured and sutured into place.
      5. Ensure all drains/tubing/catheters are secured.
      6. Empty any urinary or fecal drainage bags
      7. Arrange lines and tubes:
         a. IV lines: lines placed in the upper body should be aligned up to the shoulder with excess tubing at the HOB
         b. Chest tubes and lines/tubes in the lower body are aligned with either leg and extended off the end of the bed
   E. Gather the Team
      1. RT at the head of the bed (stabilizes the ETT throughout procedure)
      2. RN/NSTs: Two persons per side
      3. Designate the team leader; RT is first option, as they are managing the airway
      Patient Set Up (just prior to the turn):
      1. Ensure adequate sedation/comfort.
      2. Patient is on lift sheet
      3. Place arms down next to the body, tuck hand slightly under hips
      4. Remove gown
      5. Place dri-flow pad across hips/abdomen/groin
      6. Max inflate mattress
Prone Guideline

F. Final Points
   1. Reconnect all lines and tubes
   2. Secure Foley tubing with stabilizing device. Run catheter between legs, never under legs
   3. If using temporal area for TOF monitoring, remove electrodes before turning head to that side
   4. Ensure no wrinkles to underlying sheets
   5. Consider placing protective cloth between skin and lines that are laid over patients such as IV tubing
   6. Place patient in reverse Trendelenburg at 20 degrees
Z-flo Positioner for Prevention

**Inclusion Criteria:**
- Ventilated/sedated
- Abnormal posturing of neck
- Paralytics >48 hours
- Vasopressors (>1) and >48 hrs
- Prominent occiput
- ECMO
- Prone

**Recommendations:**
- Follow your facility’s safe handling policies and procedures for patient positioning
- Positioners are single patient use but can travel with the patient across the continuum of care
- When soiled, clean positioner with a hospital-approved disinfectant
- If accidentally cut or punctured, clean up the contents with a degreaser (contact Environmental Services) and replace product

**Head Positioning**

1. With the head positioned to the left or right, lift the head and place an appropriately sized positioner under the head, starting at the base of the neck.
2. Create a divot for the down ear.
3. Mold the positioner toward the head.
4. Additional divots can be created to support any lines, tubes, or drains.
5. Reposition the head regularly. Micro-molds can be made to provide small weight shifts, when appropriate.

**Always:**
- Start with a flattened positioner for initial positioning and/or repositioning
- Cover positioner with a layer of linen or a disposable covering

1. Choose a positioner slightly broader than the shoulders.
2. Place positioner under the head and neck and align with top of the shoulders.
3. With flat hands mold the positioner from the perimeter towards the ears to fill in the cervical spine area. Use your thumb to mold divots to accommodate ears as needed.
   - Mold, Don’t Fold!
4. Ensure head and neck are in neutral alignment. Force material below the occiput to increase neck extension.

**Z-flo application video link below**
https://www.youtube.com/watch?v=7vECV_Db7tU
14 hospitals completed the survey
14 used ETAD as routine securement device
While Prone
  • ETAD x 6
  • Tape x 6
  • Twills x 2
ETT Care-Informal Community Survey

- Offloading Interventions
  - ETT is moved to the side of the face that is up x 1
  - RT assists with q 2 hr turns x 1
  - Reposition the head and ETT q 2 hrs x 3
  - Z-flow (various techniques) x 9
    - to offload cheeks x 2
    - under the face, chest at nipple line and under pelvis x 1
    - smaller Z-flo pillows for support and repositioning head x 1
    - under face and mold to off-load pressure points from devices-1
    - To offload x 4
Skin protection under ETADs

- No sting barrier film x 1
- Multilayer silicone foam (various techniques) x 2
  - T-shape PRN to protect septum
  - Under cheek adhesive
Skin protection under twills/tape

- No sting barrier film x1
- Silicone reusable pad or multilayer silicone foam
- Use trach tie to the posterior neck under tape x4
- Change tape daily x 4 (no other hospitals mentioned change frequency)
- Multilayer silicone foam (various techniques) x 4
  - On cheeks under tape x 1
  - On cheeks PRN x 2
  - Diamond orientation with silicone border tucked deep to the oral commissure x 1


MHA ToolKit: [Manual Proning in Critical Care.pdf](mnhospitals.org)

NPIAP: [npiap_pip_tips_-_proning_202.pdf](ymaws.com)

WOCN: [WOCN Society COVID-19 Resources | WOCN Society](#)