F314

§483.25(c) Pressure Sores

Based on the comprehensive Assessment of a resident, the facility must ensure that—

• (1) A resident who enters the facility without pressure sores does not develop pressure sores unless the individual’s clinical condition demonstrates that they were unavoidable, and

• (2) A resident having pressure sores receives necessary treatment and services to promote healing, prevent infection and prevent new sores from developing.

The intent of this requirement is that the resident does not develop pressure ulcers unless clinically unavoidable and that the facility provides care and services to:

- Promote the prevention of pressure ulcer development;
- Prevent the healing of pressure ulcers that are present (including prevention of infection to the extent possible); and
- Prevent development of additional pressure ulcers.

• 32 pages of guidance
• One of larger sections of the State Operations Manual
• This matters to someone… and it definitely should matter to us
Overview

• Why study this
• Prevention and risk assessment
• Assessment of wounds
• Treatment

Why

• F314
  • Surveys
  • Cost
  • Prevalence

More F314

• 14.1% of all surveys nationally cite F314 in 2010
• 9.4% of surveys in Alabama
• 12.8% nationally in 2014
• 12.9% in Alabama in 2014

• Nationally, improved by 9%
• 36% worse in Alabama!
• Around #10 in most frequent citations each year

Nursing Home Data Compendium, 2015. CMS
Prevalence

- 2.5 million patients per year

Cost

- $9.1-11.6 Billion in US
- Cost of treating one ulcer $20,900 to $151,700
- Cost is borne by patients, taxpayers and facilities

F314

- Avoidable Pressure Ulcer
  - The resident developed a pressure ulcer and the facility did not do one or more of the following:
    - evaluate the resident's clinical condition and pressure ulcer risk factors;
    - define and implement interventions that are consistent with resident needs, resident goals, and recognized standards of practice;
    - monitor and evaluate the impact of the interventions; or
    - revise the interventions as appropriate.
F314

• Unavoidable Ulcer
  • Simply: an ulcer that develops in spite of meeting these guidelines

• Document this!

• Ulcers other than pressure ulcers are covered under F309 (Quality of Care)

F501

• Medical director is responsible for
  • Implementation of resident care policies
  • Overall quality of care
  • Monitoring and ensuring implementation of policies

F385

“Supervising the medical care of residents” means participating in the resident’s assessment and care planning, monitoring changes in resident’s medical status, and providing consultation or treatment when called by the facility.

Facilities should share MDS and other assessment data with the physician.
Prevention: Assess Risk

- All facilities should evaluate patients for skin health and risk on admission and periodically as clinically indicated.
- Use available tools to assess risk
  - Braden Scale
  - Norton Score
  - interRAI Pressure Ulcer Risk Score (PURS)

### BRADEN SCALE - Pressure Sore Risk

<table>
<thead>
<tr>
<th>Bradley</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
</tr>
</tbody>
</table>

**Stage I**
- A reddened area on the skin that, when pressed, is “non-blanchable” (does not turn white). This indicates that a pressure ulcer is beginning to develop.
- **Stage II**
- The skin breaks down to form an open sore that is non-blanchable. The area around the sore may be red and irritated.
- **Stage III**
- The skin breaks down to form an open sore that may contain dead tissue below the skin.
- **Stage IV**
- When serious, this is the most severe stage. The ulcer has become so deep that it is in danger to the muscle, bone, and sometimes tendons and joints.

**Pressure**

**Friction**

**Shear**

**Moisture**

- All contribute to causing ulcers
**History**

- Immobility
- Dehydration
- Age
- Diminished mentation
- Anemia
- Obesity
- Medications

- Low body weight
- Hyperthermia
- Hypotension
- Poor sensation
- Incontinence
- Malnutrition
- Infection
- Ischemia

---

**Nutrition**

- Obesity
- Low body weight/ Cachexia
- Dehydration
- Poor nutrition
  - Low albumin
  - Dysphagia/swallowing problems
  - Anorexia
  - etc.

- Dehydration
- Poor nutrition
- Low albumin
- Dysphagia/swallowing problems
- Anorexia
- etc.

---

**National Nursing Home Improvement Collaborative**

- Intensive preventative intervention
  - 69% decline in new facility acquired Stage 3 and 4 ulcers
  - Little to no impact on Stage 1 and 2
- Message?
  - Prevalence of stage 1 and 2 have no correlation to stage 3 and 4 ulcers
  - May want to separate in your in house data…

Patient has developed a Stage 3 ulcer on the right greater trochanter measuring 3 x 2 x 2.3cm with moderate exudate, gray slough and eschar on the edge from 3-6 o'clock, 1 cm undermining from 6-10 o'clock and maceration in the periwound area. No tunneling or granulation tissue is noted.

• Be an aid to your patients and your facility/staff
  • Speak the language!
  • Know the basics of evaluating an ulcer

N.B.
• Not uncommon for wounds to be multifactorial
  • Consider vascular workup for extremity ulcers
  • Your facility will appreciate it
• If it's not "pressure," it falls under F309 and is not reportable on MDS
Staging

- Stage 1: intact skin with non-blanchable erythema
- Stage 2: partial thickness loss of dermis presenting as shallow ulcer with red pink bed, no slough. May present as an open or intact blister
- Stage 3: full thickness tissue loss. Subcu fat visible but no involvement of muscle or bone
- Stage 4: full thickness with involvement of muscle or bone. Often includes undermining or tunneling.

More Staging

- Suspected deep tissue injury: purple or maroon but intact skin. May be boggy, mushy and warmer or cooler than surrounding skin
- Unstageable: full thickness tissue loss in which the base of the ulcer is completely covered by slough and/or eschar

Measuring convention:
- Longest measurement x perpendicular length x depth
- Direction convention: borders of wound are identified like a clock
  - 12:00 is toward head except on feet where 12:00 is toward toes
Definitions

- **Slough**: stringy, tenacious exudate; may be yellow, tan, gray, green or brown
- **Eschar**: hard, devitalized tissue. Usually black, but may be tan or brown
- **Maceration**: periwound tissue damage caused by excessive moisture. May be red or an almost translucent white
- **Undermining**: wide, relatively shallow extension of wound underneath the edge of the wound
- **Tunneling**: deep, relatively narrow extension of the wound under an edge or at the base
- **Periwound**: area around the ulcer
- **Granulation tissue**: beefy, red tissue that fills wound base. This is the penultimate stage of wound healing
- **Hypergranulation** (“proud flesh”): granulation tissue that extends outside of wound bed. Can impede epithelialization
- **Epithelialization**: growth of new epithelium. The ultimate stage of healing.

---

**Slough**
Granulation tissue

Hypertrophic granulation

Ulcer Evaluation

• Location
  • Where is it on the patient

• Staging
  • I-IV, unstageable, suspected deep tissue injury

• Measurements
  • Standard convention

• Description
  • What do you see in and around the wound
Before starting

- **Goal** of treatment
- How will this effect *quality of life* or life expectancy
- How will you manage *pain*

Initial Management

- Pressure ulcers come from pressure, shear and moisture..... We’ve got to eliminate these...
- Offloading
- Specialty beds and surfaces
- Floating of heels
- Dealing with moisture (numerous causes)
- Shear—
  - Caused by patient
  - Caused by staff
• Address nutrition
  • Albumin, pre-albumin
  • Adequate dietary intake
  • Hydration
  • Assess for infection

Local/wound management of Stage 1

• Little is needed
  Monitoring is usually adequate… may need to address shear or moisture
• Should be evaluated regularly
  • Make sure you are comfortable with monitoring frequency and system

Remember…
  the principal cause of pressure ulcers is….
  Pressure
• Think about what is causing the pressure for your patient
  • Sacrum
  • Ischium
  • Trochanter
  • Heels
Types of Debridement

- Sharp/surgical
- Mechanical
  - Whirlpool or pulsevac
  - Wet-to-dry
- Enzymatic
  - Santyl
- Autolytic
- Biologic (maggots)

Don't be afraid to debride!

Dealing with Hypergranulation Tissue

- Impairs epithelialization
- Can be debrided or "cut down"
- Silver nitrate cautery is simple and effective
Off loading!

- Turning – avoid affected surface
- Specialized bed and seating surfaces
- Pay special attention to heels

Bed Surfaces

---

---
Protecting the ischia…

What about heels and toes…

Wound cleansing

• Normal saline
• Commercial wound cleansers
• Avoid
  • Betadine
  • Hydrogen peroxide
  • Dakin’s solution
  • Other cytotoxic agents
• Hypochlorous Acid (HOCL)
Dressings

Purposes of a wound dressing…

- Provide ideal moist wound environment
- Keep surrounding skin dry
- Prevent contamination
- Obliterate dead space
- Absorb exudate
- Protect wound
- Control odor

Considerations in dressing choice…

- Effectiveness and appropriateness
- Cost-effectiveness
- Labor intensity
- Time to place and maintain
- Ease of application
• Granulation tissue and/or epithelium
  • Protect
  • No moisture
  • Add moisture
  • Limited moisture
  • Preserve moisture
  • Wet
  • Absorb moisture

• Bacterial colonization/bioburden
  • Control surface bacteria with antimicrobial dressing
• Infected ulcer
  • Control surface bacteria
  • Manage odor (charcoal dressings)
  • Consider systemic antibiotics

• Gauze
  • Most commonly used as a secondary dressing
  • If primary, use moistened and change frequently
  • Do NOT let it dry
  • Cheap
  • Lots of shapes, sizes and lengths
Absorbent Dressings

• Calcium alginate
  - Made from seaweed
  - Promotes some autolytic debridement
  - Converts to a viscous, hydrophilic gel
  - Kaltostat, Sorbsan and others
  - Can be impregnated with silver

• Hydrofibers
  - Similar to alginate but more absorbent
  - Aquacel and others
  - Available with silver

• Foam dressings
  - Very absorbent
  - Usually a secondary dressing
  - Lyofoam and others

• Hydrofera blue
  - Similar to hydrofibers but different structure
  - Absorbent
  - Contains ginseng violet as an antimicrobial
Hydrogels
- Provides moisture to wound
- Promotes autolytic debridement
- Cooling and soothing, may decrease pain
- Covered with secondary dressing, most commonly gauze

Moisture preserving
- Ointments
  - Antibiotic or otherwise
  - Covered with secondary dressing
- Transparent films
  - Not past stage 2
  - Op-site, Tegaderm and others

Hydrocolloids
- Contains gel forming agents
- Promotes autolytic debridement
- Good on Stage 2
- Duoderm, Tegasorb and others
• Activated charcoal
  • Used to control odor
  • Usually has silver or other antimicrobial

• Antiseptics
  • Dakins, peroxide, domobro, iodine
  • Acute ulcers or evidence of infection for a limited time
  • Hypochlorous Acid/solution (HOCl)

Negative Pressure Therapy
• Manages exudate
• Low maintenance
• Very effective
• Avoid with
  • Necrotic tissue
  • Osteomyelitis
  • Exposed arteries or veins
• Expensive

Some final thoughts…
• Try new things
• Always think about the “host”
• Know the plan for your patient
• Have a relationship with a wound center
• Don’t be afraid to debride

Remember **Avoidable** Pressure Ulcers

• **Evaluate** the patient
  • Use a tool to assess risk
  • Periodic skin assessments

• **Implement interventions**
  • Address Pressure, Friction, Shear and Moisture
  • Address Nutrition and other “host factors”

• **Monitor** your interventions
• **Revise** treatment when needed
If you do this, your ulcer may be treated as
**Unavoidable**

Select resources

• AMDA—The Society for Post-Acute and Long-Term Care Medicine. Pressure Ulcers and Other Wounds in the Post-Acute and Long-Term Care Setting Clinical Practice Guideline

• National Pressure Ulcer Advisory Panel. [www.npuap.org](http://www.npuap.org)
Questions

Grier Stewart
jgstewart1@ua.edu
205-792-6295