

**CE**

**Wound Assessment & Management:**

# Wound Care Fundamentals and **OASIS-C**

*One Home Health Agency's  
Educational Initiative*

**A**ccurate documentation in home healthcare has always been of utmost importance, and OASIS-C has taken documentation of wound-related questions to the next level. Our perspective as Certified Wound Ostomy and Continence Nurses (CWOcNs) practicing in home healthcare is that to develop the staff's expertise in answering OASIS-C wound-related questions accurately, a fresh approach was needed related to the initial home visit, a review of the fundamentals of wound assessment, mechanisms of healing, and wound terminology. This article describes an educational initiative to

strengthen skills and documentation related to the OASIS-C M items and seeks to integrate and translate assessment and evaluation findings into accurate OASIS-C documentation. It is not meant to replace the OASIS Guidance Manual. The focus of Part I of this article is laying the foundation for developing staff expertise for answering wound M items. Believing the adage that "a picture is worth a thousand words" and to add clarity, an M Item "Tip Sheet" was created to help clinicians better visualize and understand the intent of the M items. Several images are intentionally repeated to align with the M item

**BY MARY FARREN, RN, MSN, CWOcN, AND  
YANICK MARTELLY-KEBREAU, MSN, RN, CWOcN**

terminology and definitions based on wound etiology, the stage of the pressure ulcer, or healing status (Figures 1-8).

**M1306—Does this patient have at least one unhealed pressure ulcer at Stage II or higher or designated as “unstageable”?**

**Yes for figures 1-6:**



**Figure 1:**  
Stage II pressure ulcers. (Image on right courtesy of Monica Warhaftig.)

or



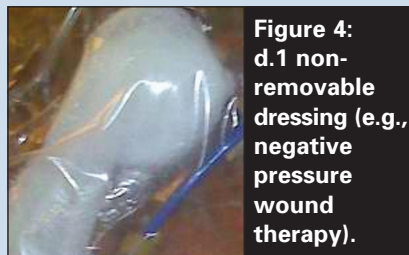
**Figure 2:**  
Open Stage III or IV pressure ulcer.

or

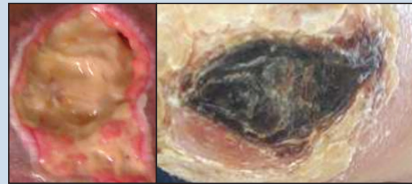


**Figure 3:** Closed Stage III or IV pressure ulcer.

**All unstageable pressure ulcers:**



**Figure 4:**  
d.1 non-removable dressing (e.g., negative pressure wound therapy).



**Figure 5:** d.2 covered by slough and/or eschar.



**Figure 6:**  
d.3 suspected DTI.

**M1307—The oldest nonepithelialized Stage II pressure ulcer that is present at discharge.**

**Stage II Definition**



**Figure 1:**  
Partial-thickness loss of dermis presents as a shallow open ulcer with red/pink tissue without slough or eschar or intact or open/ruptured serum-filled blister. (Image on right courtesy of Monica Warhaftig.)

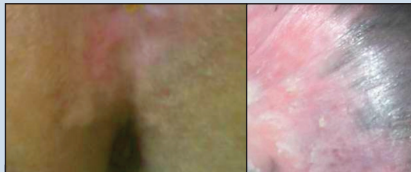
**M1320 Status of Most Problematic (Observable) Pressure Ulcer**

Stage I is excluded. Based on clinical judgment, the most problematic can be the largest, most advanced stage, most difficult to treat, etc.



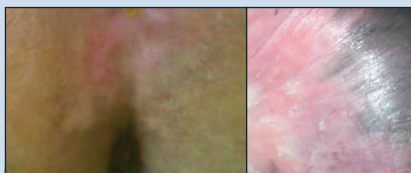
**Figure 1:**  
If the most problematic observable pressure ulcer is a stage II, the only correct response is “not healing.” (Image on right courtesy of Monica Warhaftig.)

\*See <http://links.lww.com/HHN/A2> for larger images of figures.

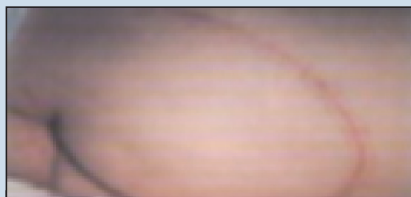


**Figure 3: Closed Stage III and IV ulcers covered by scar tissue can be the most problematic. Their status is always “newly epithelialized.”**

### Status Terminology: Newly Epithelialized



**Figure 3: Closed Stage III and IV pressure ulcers-regardless of how long they have been closed.**



**Figure 7: Surgical wound fully epithelialized 30 days or less.**

### Status Terminology: Not Healing

“Not healing” for pressure ulcers, venous stasis ulcers, and surgical wounds: See Table 1, “WOCN Wound Status Definitions.” Per OASIS-C Guidance, “Not healing” also includes a surgical wound healing by primary intention that is not completely epithelialized. For example: an incision approximated and closed with sutures, staples, or other adhesive bonding agents that is not completely epithelialized is stasured as “not healing.” Also for consideration, observation of a

scab on a surgical incision indicates that full epithelial resurfacing has not occurred (CMS, 2010).



**Figure 8: Surgical wound closed by primary intention (approximated incision): Not healing.**

### Overview

The groundwork was laid as staff had been educated about the revisions of the Outcome and Assessment Information Set (OASIS) documentation for the latest version of OASIS, the OASIS-C. The *OASIS-C Guidance Manual* was used as the foundation for the education as the source document and readers are reminded to keep abreast of changes and clarifications through the CMS Q & A at <http://www.qtso.com/hhdownload.html>.

The Centers for Medicare and Medicaid Services (CMS) mandates the collection of OASIS-C data for all home health patients over the age of 18 requiring skilled services whose care is reimbursed by Medicare and Medicaid with the exception of patients receiving pre- and postnatal services only (CMS, 2009c). OASIS-C collects patient- and agency-specific data that have many purposes, including identification of a particular patient’s service needs, tracking the change over time for patient outcomes, determining payment algorithms, and generating reports that evaluate the home health agency (HHA)’s performance. These reports are used to guide HHAs in their quality improvement efforts and select measures are publicly reported on Medicare.gov/HomeHealthCompare, <http://www.medicare.gov/HomeHealthCompare/search.aspx>, to help consumers in their selection of home healthcare providers. The reports are generated from OASIS-C documentation completed by staff at required data collection time points. The ability of staff to understand OASIS-C M items and select the most accurate response directly impacts the quality of the reports.

The OASIS-C Integument Assessment data items and terminology can be confusing unless one has been well grounded or “re-introduced” to

the science or expertise of wound healing. For example, looking for evidence of “closed” but “not healed” Stage III and IV pressure ulcers may sound puzzling but does make sense and is based on the science of wound healing. In this case, full-thickness pressure ulcers (Stage III and/or Stage IV) heal through scar tissue formation, never heal to full tensile strength, and therefore always remain at risk for breakdown. Stage III and IV pressure ulcers that fully granulate and the surface is covered with a layer of epidermis (Black et al., 2010) can be said to be “closed” but never

“fully healed,” yet always “newly epithelialized” (see Figure 3). The terminology can be daunting but once put into context it can be less so. This article seeks to clarify these important wound and documentation-related details.



**Table 1.** Wound Ostomy Continence Nurses Society Guidance on OASIS-C Integumentary Items

<p><b>Definitions:</b></p> <p><b>Newly epithelialized</b></p> <ul style="list-style-type: none"> <li>■ Wound bed completely covered with new epithelium</li> <li>■ No exudate</li> <li>■ No avascular tissue (eschar and/or slough)</li> <li>■ No signs or symptoms of infection</li> </ul> <p><b>Fully granulating</b></p> <ul style="list-style-type: none"> <li>■ Wound bed filled with granulation tissue to the level of the surrounding skin</li> <li>■ No dead space</li> <li>■ No avascular tissue (eschar and/or slough)</li> <li>■ No signs or symptoms of infection</li> <li>■ Wound edges are open</li> </ul> <p><b>Early/partial granulation</b></p> <ul style="list-style-type: none"> <li>■ ≥25% of the wound bed is covered with granulation tissue</li> <li>■ &lt;25% of the wound bed is covered with avascular tissue (eschar and/or slough)</li> <li>■ No signs or symptoms of infection</li> <li>■ Wound edges open</li> </ul> <p><b>Not healing</b></p> <ul style="list-style-type: none"> <li>■ Wound with ≥25% avascular tissue (eschar and/or slough) OR</li> <li>■ Signs/symptoms of infection OR</li> <li>■ Clean but nongranulating wound bed OR</li> <li>■ Closed/hyperkeratotic wound edges OR</li> <li>■ Persistent failure to improve despite appropriate comprehensive wound management</li> </ul> <p><small>Note. Data from WOCN (2009).</small></p>
--

### Pressure Ulcer Prevention

Helping clinicians to understand the connection between their clinical assessments, implementation of best practice interventions, and the OASIS-C wound process measure items provides perspective into how the collection of these data paints a picture of the specific patient’s skilled needs and the eventual patient outcomes. This was illustrated by referring to the pressure ulcer M items. This HHA had already incorporated best practice interventions to guide clinical practice in its computerized documentation system and facilitated this effort. We emphasized how OASIS-C brought a needed focus on the importance of pressure ulcer risk assessment and prevention, and further supports the clinical efforts of various healthcare providers to reduce pressure ulcer incidence.

OASIS-C items M1300 Pressure Ulcer Assessment and M1302 Risk of Developing Pressure Ulcers identify patients at risk “with or without a formal pressure ulcer screening tool.” M2250 Plan of Care Synopsis indicates the physician’s agreement with planned interventions, and M2400 Intervention Synopsis tracks the implementation of the interventions within a defined quality episode and should ultimately lead to improvement in prevention efforts. M1308 Current Number of Unhealed Pressure Ulcers reports to some degree the success of those interventions. The OASIS items guide the clinicians to focus on pressure ulcer prevention in their care planning, and reduced incidence becomes a shared responsibility between clinical care providers, HHAs, patients, and caregivers.

CMS does not mandate the use of a particular pressure ulcer risk assessment tool; our organization chose the Braden Scale for Predicting Pressure Sore Risk for standardization (Braden & Bergstrom, 1988). See Table 2 Braden Scale. Our agency's best practice interventions correspond to the areas of specific risk identified by the assessment, sensory perception, moisture, activity, mobility, nutrition, and friction/shear.

**OASIS-C data items** will impact the reported process and outcome measures and may affect the clinical dimension and nonroutine supply score, resulting in reimbursement that does not correspond to the patient's real condition.

### Clinical Practice: Preparing for and Conducting the Integumentary Assessment

To capture clues that guide clinicians to the most accurate response to the OASIS-C wound questions, a standardized approach to the assessment and observation of the patient's skin for evidence of wounds and scars is recommended. An examination of the patient's skin from head to toe is facilitated when the patient and/or caregiver is **prepared** for the home visit. We found that it is best to notify the patient/or caregiver to expect a physical assessment examination by the clinician similar to one performed in their primary care provider's office. Ask the patient or caregiver to have the patient dressed comfortably for this examination. This request can be integrated into "please have all the medications the patient is taking on the kitchen table" and other requests usually made in that introductory phone call to the patient about home care services and the first scheduled visit.

During the home visit ask whether the patient has a history of pressure ulcers, stasis ulcers, surgical wounds, or other wound types, and also **look** for evidence of wounds or scars while performing the physical and functional assessments. Provide privacy when assessing the skin. Ideally, the examination is done with adequate light. When assessing for pressure ulcers touch all bony prominences, including the heels, and check for warmth, boggy, and patient report of sensation, especially in patients with darker skin tones where Stage I pressure ulcers are not easily visualized.

The assessment of the patient's risk of development of pressure ulcers related to friction or

shearing injury can be included as part of the functional activity assessment when the patient is observed in transfer activities by himself, such as from bed to chair and/or while the patient is being transferred by a caregiver. Take the opportunity to teach the patient and all caregivers about the risks and interventions for prevention of pressure ulcers, what to look for, and the need to communicate to the nurse and physician any signs of skin breakdown and additional risk. Communicating and interpreting the pressure ulcer risk score with the patient and caregivers further alerts them to the potential for skin breakdown. Share the findings and risk score with the entire home healthcare team providing care, including the physician. Use the phrase "If you see something say something" when teaching about skin inspections. This promotes shared responsibility between the patient and all care providers and keeps attention directed toward prevention and early treatment of pressure ulcers and other skin lesions.

When pressure ulcers are observed, follow the 2007 National Pressure Ulcer Advisory Panel recommendations for staging them, see <http://www.npuap.org>. Failure to capture any unhealed wound or evidence of scar tissue from closed pressure ulcers on the initial OASIS-C assessment that are identified on subsequent assessments will signify that these wounds either developed or deteriorated "under care" of the agency, which may be accurate or not. Wounds present but not observed at the Start of Care have a big impact on the patient, agency, and care provided. Not reporting these wounds in the relevant OASIS-C data items will impact the reported process and outcome measures and may affect the clinical

**Table 2.**

**Braden Scale for Predicting Pressure Sore Risk**

Patient's Name: \_\_\_\_\_

Evaluator's Name: \_\_\_\_\_

<p><b>SENSORY PERCEPTION</b></p> <p>ability to respond meaningfully to pressure-related discomfort</p>	<p><b>1. Completely Limited</b>                      Unresponsive (does not moan, flinch, or grasp) to painful stimuli, due to diminished level of consciousness or sedation                      OR                      limited ability to feel pain over most of body.</p>	<p><b>2. Very Limited</b>                      Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness                      OR                      has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body.</p>
<p><b>MOISTURE</b></p> <p>degree to which skin is exposed to moisture</p>	<p><b>1. Constantly Moist</b>                      Skin is kept moist almost constantly by perspiration, urine, etc. Dampness is detected every time patient is moved or turned.</p>	<p><b>2. Very Moist</b>                      Skin is often, but not always moist. Linen must be changed at least once a shift.</p>
<p><b>ACTIVITY</b></p> <p>degree of physical activity</p>	<p><b>1. Bedfast</b>                      Confined to bed.</p>	<p><b>2. Chairfast</b>                      Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.</p>
<p><b>MOBILITY</b></p> <p>ability to change and control body position</p>	<p><b>1. Completely Immobile</b>                      Does not make even slight changes in body or extremity position without assistance.</p>	<p><b>2. Very Limited</b>                      Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.</p>
<p><b>NUTRITION</b></p> <p>usual food intake pattern</p>	<p><b>1. Very Poor</b>                      Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement                      OR                      is NPO and/or maintained on clear liquids or IVs for more than 5 days.</p>	<p><b>2. Probably Inadequate</b>                      Rarely eats a complete meal and generally eats only about of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement                      OR                      receives less than optimum amount of liquid diet or tube feeding.</p>
<p><b>FRICITION &amp; SHEAR</b></p>	<p><b>1. Problem</b>                      Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures or agitation leads to almost constant friction.</p>	<p><b>2. Potential Problem</b>                      Moves feebly or requires minimum assistance. During a move skin probably slides to some extent against sheets, chair, restraints or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.</p>

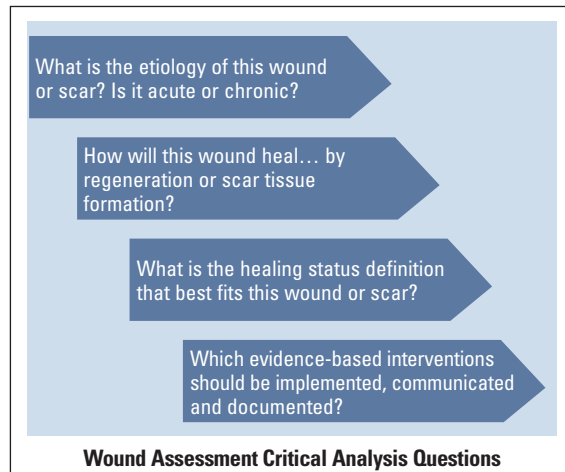
© Copyright Barbara Braden and Nancy Bergstrom, 1988. All rights reserved. Reprinted with permission.

Date of Assessment: \_\_\_\_\_

<p><b>3. Slightly Limited</b> Responds to verbal commands, but cannot always communicate discomfort or the need to be turned  OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.</p>	<p><b>4. No Impairment</b> Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.</p>				
<p><b>3. Occasionally Moist:</b> Skin is occasionally moist, requiring an extra linen change approximately once a day.</p>	<p><b>4. Rarely Moist</b> Skin is usually dry, linen only requires changing at routine intervals.</p>				
<p><b>3. Walks Occasionally</b> Walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.</p>	<p><b>4. Walks Frequently</b> Walks outside room at least twice a day and inside room at least once every two hours during waking hours.</p>				
<p><b>3. Slightly Limited</b> Makes frequent though slight changes in body or extremity position independently.</p>	<p><b>4. No Limitation</b> Makes major and frequent changes in position without assistance.</p>				
<p><b>3. Adequate</b> Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products per day. Occasionally will refuse a meal, but will usually take a supplement when offered  OR is on a tube feeding or TPN regimen which probably meets most of nutritional needs.</p>	<p><b>4. Excellent</b> Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.</p>				
<p><b>3. No Apparent Problem</b> Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair.</p>					
Total Score					

dimension and nonroutine supply score, resulting in reimbursement that does not correspond to the patient's real condition.

To assist the clinician in the skin and wound assessment, four "critical questions" were developed to guide the assessment.



### 1. What is the etiology of this wound or scar?

The patient's medical and surgical history are important to consider when initially trying to determine the etiology; to confirm observations ask the patient/caregiver and/or physician about the etiology and history of the wound or scar. Determine whether the wound is acute or chronic. Baranoski and Ayello (2008) describe traumatic and surgical wounds that close by primary intention as typical "acute wounds." Chronic wounds are those healing by secondary intention. These wounds do not progress through the normal phases of healing in an orderly and timely manner because the molecular environment is altered (Bryant & Nix, 2007). Therefore, knowing the length of time a wound has remained open is important when determining the "status" for OASIS-C M items and is also a consideration to establish whether the goal of wound treatment and the Plan of Care (POC) is healing, maintenance, or palliation. The goal for wound management and interventions may also influence wound treatment choices.

When determining the etiology of wounds, clinicians can use several rules of thumb:

- Wounds/scars located over a bony prominence can suggest the etiology may be

pressure-related. The presence of scar tissue is a clue that the ulcer was originally a Stage III or IV pressure ulcer and is reported as such on OASIS-C.

- Wounds/scars on the lower legs can result from several possible etiologies. Among them are venous or arterial diseases or mixed venous arterial disease or a surgical procedure. The Wound Ostomy Continence Society offers clinical fact sheets that are very helpful in differentiating wound types of the lower extremities (WOCN, n.d.; [http://www.wocn.org/pdfs/WOCN\\_Library/Fact\\_Sheets/C\\_QUICK1.pdf](http://www.wocn.org/pdfs/WOCN_Library/Fact_Sheets/C_QUICK1.pdf)).
- Wounds/scars on the feet can be the result of pressure, arterial disease, and may be neuropathic or diabetes-related, surgical, trauma, or from other etiology.

Consult the OASIS-C Guidance Manual and CMS Q & A instructions to determine when an open or closed (epithelialized) wound or lesion is reportable in OASIS-C data items. For example, from that guidance we know that wounds of surgical etiology that are fully reepithelialized longer than 30 days from complete closure become "scars" and are not reported on OASIS-C. There are some skin openings that for OASIS-C purposes are not considered surgical wounds. These include, but are not limited to, ostomies, chest tube exit sites, and nephrostomy sites.

### 2. How will this wound heal?

Depending on the wound type, there are several mechanisms for healing. Determine the answers to these questions: if the wound is a partial- or full-thickness wound, will it heal by regeneration or scar tissue formation? If it is a surgical wound, will it heal by primary or secondary intention? Should the wound be included in the OASIS-C data items?

- Key to selecting the correct OASIS data wound responses is observing what the wound bed reveals through a detailed assessment. The assessment includes identifying tissue type and appearance. Look for visible structures such as subcutaneous tissue, muscle, tendon, bone, and/or ligaments. The identification of these structures will help to distinguish partial-thickness from



full-thickness wounds and/or provide information about the stage of a pressure ulcer.

- Wound healing mechanisms and times to heal differ depending upon the depth of tissue injury; presence of scar signifies that the closed pressure ulcer had full-thickness damage (Bryant & Nix, 2007).

### Partial-Thickness Wounds

**Partial-thickness wounds** are confined to the skin layers; skin damage does not penetrate below the dermis and may be limited to the epidermal layers only (WOCN, 2009).

#### Mechanism of Healing: Regeneration

The mechanism for healing of a partial-thickness wound is **regeneration**. Because the tissue injury of a partial-thickness wound involves only the epidermis and possibly the superficial dermal layers of the skin, the body is able to replace or **regenerate** that lost or damaged tissue with more of the same tissue. Epithelial tissue usually starts to appear as pink, purple tissue at the edge of a wound, but may also appear as islands in the center of a partial-thickness wound. The newly resurfaced epithelium appears pale pink, dry, and gradually repigments when completely healed (Bryant & Nix, 2007). It is important to note that Stage II pressure ulcers heal by

**To capture clues** that guide clinicians to the most accurate response to the OASIS-C wound questions, a standardized approach to the assessment and observation of the patient's skin for evidence of wounds and scars is recommended. An examination of the patient's skin from head to toe is facilitated when the patient and/or caregiver is prepared for the home visit.

regeneration. If a superficial wound has slough or eschar, it is no longer a partial-thickness wound, but is a full-thickness wound regardless of the depth. Slough is soft, moist avascular (devitalized) tissue; it may be white, yellow, tan, gray, or green; it may be loose or firmly adherent (WOCN, 2009). Eschar is black or brown necrotic, devitalized tissue; it can be loose or firmly adherent, hard, soft, dry, or wet (WOCN, 2009). Therefore, a pressure ulcer with slough or eschar is at least a Stage III and may be a Stage IV.

#### Strength and Function

The tissue of a partial-thickness wound regains its full tensile strength and function. With complete reepithelialization, the wound is healed.

### Full-Thickness Wounds

**Full-thickness wounds** penetrate deeper tissue layers. Full-thickness wounds are observed to have tissue damage involving the total loss of epidermis and dermis, extending into the subcutaneous tissue and possibly into the muscle or bone (WOCN, 2009).

A full-thickness wound, if pressure-related, is a Stage III or Stage IV pressure ulcer. A Stage III pressure ulcer involves tissue loss extending through the dermis and into the subcutaneous tissue. A Stage IV pressure ulcer involves the same tissue loss and, in addition, has muscle or bone exposure. The loss of these original tissue structures is permanent, and for that reason, Stage III and IV pressure ulcers are **incapable** of "fully healing." Once

#### Recommended Web Sites

##### Websites

- <http://www.qtso.com/hhdownload.html>
- <http://www.medicare.gov/HomeHealthCompare/search.aspx>
- <http://www.npuap.org/pr2.htm>

##### (WOCN) Quick Assessment of Leg Ulcers at

- [http://www.wocn.org/pdfs/WOCN Library/Fact\\_Sheets/C\\_QUICK1.pdf](http://www.wocn.org/pdfs/WOCN%20Library/Fact_Sheets/C_QUICK1.pdf) (WOCN) Guidance on OASIS-C
- [http://www.wocn.org/pdfs/Guidance OASIS-C.pdf](http://www.wocn.org/pdfs/Guidance%20OASIS-C.pdf)

**Failure to capture** any unhealed wound or evidence of scar tissue from closed pressure ulcers on the initial OASIS-C assessment that are identified on subsequent assessments will signify that these wounds either developed or deteriorated “under care” of the agency, which may be accurate or not.

fully reepithelialized, Stage III and IV pressure ulcers are considered “closed” but “unhealed” for the purposes of OASIS-C items. Unstageable pressure ulcers due to slough and/or eschar (d.2) and deep tissue injury (d.3) referenced in OASIS-C data items M1308 are also examples of full-thickness pressure ulcers.

#### **Mechanism of Healing: Scar Tissue Formation and Contraction**

The mechanism for healing of full-thickness wounds is scar tissue formation. Granulation tissue or scar tissue fills the defect, the wound edges contract and the granulation tissue is eventually covered with an epidermal layer of cells (Black et al., 2010). Once fully epithelialized, the wound is “closed” and its status is considered “newly epithelialized” for M1320 Status of the Most Problematic Pressure Ulcer. Stage III and IV pressure ulcers heal by scar tissue formation.

#### **Strength and Function**

When these full-thickness wounds and Stage III and Stage IV pressure ulcers close, the tensile strength of the scar tissue achieves approximately 80% of nonwounded tissue (Bryant & Nix, 2007), leaving the patient at risk for future skin breakdown. OASIS-C acknowledges this risk and these closed Stage III and Stage IV pressure ulcers are reportable in the relevant wound assessment items.

### **Stasis Ulcers**

**Stasis ulcers** are venous ulcers caused by venous insufficiency in the lower extremities and are often accompanied by edema. Venous ulcers are moist, shallow with granulation tissue

and sometimes with slough. Slough is a yellow, fibrous, avascular tissue (WOCN, 2009).

#### **Mechanism of Healing: Scar Tissue Formation and Contraction**

Stasis ulcers heal by scar tissue formation, granulation, contraction, and epithelialization.

#### **Strength and Function**

For OASIS-C purposes, when stasis ulcers fully reepithelialize, they are considered healed and are not reported in OASIS-C data items (CMS, 2009b).

### **Surgical Wounds**

**Surgical Wounds** result from a surgical procedure and information about them is collected in OASIS-C M items until the wound becomes a scar.

#### **Mechanism of Healing**

Surgical wounds heal by two mechanisms: primary intention and secondary intention.

#### **Primary Intention**

A surgical wound healing by **primary intention** has wound edges that are reapproximated, without gaps, and held together with sutures, staples, or chemical bonding agents immediately at the time of surgery. Because these wounds are approximated, “there is limited amount of connective tissue to mend the defect” (Bryant & Nix, 2007, p. 64) and that granulation is not visible due to the well-approximated wound edges. “In a normally healing incision, epithelial resurfacing is typically complete within 24-48 hours” (Bryant & Nix, 2007, p. 64). For OASIS-C purposes, observation of a scab on a surgical incision indicates that full epithelial resurfacing has not occurred (CMS, 2010). Once complete reepithelialization is present for approximately 30 days, unless it dehisces or presents signs of infection, a surgical wound healing by primary intention is generally described as a scar (CMS, 2009c).

#### **Secondary Intention**

Surgical wounds with edges intentionally left open to heal are considered healing by **secondary intention**. In addition, for OASIS-C purposes, any surgical wound with an area of wound separation should

be considered as healing by secondary intention in order to status the wound (CMS, 2010). Surgical wounds healing by secondary intention heal by granulation or scar tissue formation, contraction, and reepithelialization (Bryant and Nix, 2007).

### 3. What is the healing status that best fits this wound or scar?

The status of a wound for OASIS-C purposes identifies the degree of wound closure that is visible to the clinician during assessment. In order to determine the healing status of a pressure ulcer, stasis ulcer, and/or surgical wound, the clinician must match the characteristics observed about the wound to the definition for not healing, early/partial, fully granulating, and newly epithelialized wound status, provided in the Wound Ostomy Continence Nurses Society Guidance on OASIS-C Integumentary Items (see Table 1) (WOCN, 2009).

Stage II pressure ulcers do not granulate (CMS, 2009c) and their status is documented as “not healing.” Once healed or fully epithelialized, Stage II pressure ulcers are no longer reported in OASIS-C data items. If Stage II pressure ulcers fail to heal or reoccur then the effectiveness of the intervention related to healing or prevention requires further evaluation. Patients discharged from the agency with a Stage II pressure ulcer that has remained unhealed for 30 days or more are captured in CMS quality reports as a Potentially Avoidable Event (CMS, 2009a).



**Figure 1:** Stage II pressure ulcers are statused as “not healing.” (Image on right courtesy of Monica Warhaftig.)

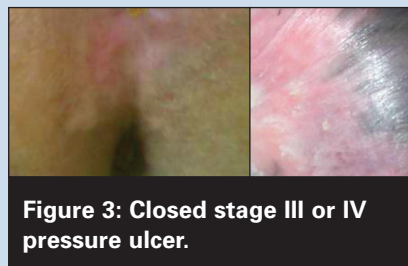
For **Open Stage III or IV pressure ulcers**, the degree of wound closure or status of wound healing is determined by assessing the condition of the wound edges, the amount of epithelial, granulation, and/or avascular tissue present in

the wound bed, observing for signs and symptoms of infection and noting the progress of healing. Stage III and Stage IV pressure ulcers can be “not healing,” “early/partial granulation,” “fully granulating,” and “newly epithelialized” (see Table 1) depending on the assessment.



**Figure 2:** Open stage III or IV pressure ulcer.

Closed Stage III and IV pressure ulcers appear as scar tissue, fully epithelialized, and the status is “newly epithelialized”; these ulcers are considered closed but “unhealed” and must be reported when responding to M 1306 unhealed pressure ulcer at Stage II or higher. If the closed pressure ulcer reopens, remember to stage the ulcer as a Stage III or IV depending upon the history of the ulcer, reporting it at its worst stage.

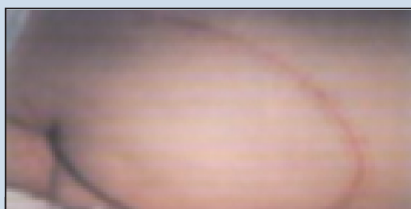


**Figure 3:** Closed stage III or IV pressure ulcer.

### Stasis Ulcers

Granulation and epithelial tissue may be visible upon assessment of a **stasis ulcer**. Stasis ulcers can be statused as “not healing,” “early/partial granulation,” or “fully granulating,” depending on the condition of the wound and the tissue that is observed at the time of assessment. However, once epithelialized, the stasis ulcer is considered healed. A stasis ulcer with complete reepithelialization visible upon assessment is not reported for OASIS-C items. As a result, the status of “newly epithelialized” is **not** applicable.

**Surgical wounds healing by primary intention** have well-approximated wound edges. As a result, granulation tissue is not visible and only the regeneration of epithelial cells is observable on the skin surface. Therefore, it is incorrect to associate early/partial or fully granulating with surgical wounds healing by primary intention. Surgical wounds healing by primary intention with visible signs of infection are classified as “not healing” (see Table 1). Once the incision site is observed to be fully covered with epithelium, the surgical wound healing by primary intention is stasured as “newly epithelialized” (see Table 1) and will remain so for 30 days unless it dehisces or presents signs of infection. After 30 days, it is considered a scar and is not reported in any of the OASIS-C data items.



**Figure 7: A surgical wound epithelialized for 30 days or less is “newly epithelialized.”**



**Figure 8: A surgical wound closed by primary intention (approximated incisions) stasured as “not healing.”**

For **surgical wounds healing by secondary intention**, the degree of wound closure and status of wound healing are determined by assessing the condition of the wound edges, the amount of epithelial, granulation, and/or avascular tissue present in the wound bed, observing for signs and symptoms of infection, and noting the progress of healing. These wounds can be stasured as “not-healing,” “early/partial granulation,” “fully granulating,” and “newly epithelialized,” (see Table 1) depending on the assessment.

#### **4. Which evidence-based intervention(s) should be implemented, communicated, and documented based on the etiology of the wound?**

Determining the causative factors and the wound etiology is key to identifying interventions that facilitate wound healing of all types and the prevention of pressure ulcers. Evidence-based interventions should be applied throughout the process for effective wound management. “Pressure ulcers rarely can be managed to complete closure with only one form of topical treatment” (Black et al., 2010).

The use of an agency-wide standardized risk assessment tool helps to identify areas of risk. Our organization chose the Braden Scale for predicting Pressure Sore Risk because it is a standardized tool validated for use on community dwelling individuals (see Table 2—Braden Scale). The risk factors of sensory perception, moisture, activity, mobility, friction, and shear are scored and identify which of these factors or combination of factors can put a patient at risk for pressure ulcer development. Interventions to address the specific risk for a particular patient can be implemented and taught to the patient and all caregivers. The clinician spends a limited amount of time with the patient as compared with institutional settings so that the responsibility to implement the interventions rests with the patient and all caregivers. Documentation of the response to this teaching should include the patient’s and caregivers’ ability and willingness to comply with implementing the interventions. Support surfaces, mattresses and chair cushion and other offloading pressure devices are examples of interventions and should be included in the POC. The clinician should also communicate the risk score and its meaning to the patient, family, caregivers, and physician.

In addition, these interventions are also translated into the OASIS-C process measures. For example, at start of care (SOC) and resumption of care (ROC), M1300 asks whether the patient was screened for risk of pressure ulcer, M1302 asks whether the patient is at risk for developing pressure ulcers, and the POC synopsis M 2250 asks whether the physician-ordered POC includes interventions to prevent pressure ulcers. At transfer and discharge, the intervention synopsis M 2400 asks whether interventions to prevent pres-

sure ulcers were **BOTH** included in the physician-ordered POC **AND** implemented.

For lower extremity ulcers, teaching interventions specific to the underlying etiology should also be communicated to the patient and caregivers. Contacting the primary care provider for vascular testing to determine whether therapeutic compression is indicated for the lower extremity ulcers is another example of an evidence-based intervention.

## Summary

Part I reviews the fundamentals of wound assessment, wound healing mechanisms related to the OASIS-C M items, and wound terminology. Wound analysis questions act as a guide for clinicians performing a detailed wound assessment to translate the findings into accurate OASIS-C wound M item responses. Wound photographs are utilized as a reference to illustrate and bring clarity to the terminology and to match assessment findings to the most accurate OASIS-C M item response. Tips are offered for preparing the patient for the initial integumentary assessment, along with recommendations for patient and caregiver education. The importance of communicating and documenting interventions is highlighted, as this is the basis for capturing the process measures that ultimately impact the quality outcomes. ■

## Acknowledgment

The authors acknowledge and thank Rhonda Will, RN, BS, COS-C, HCS-D, assistant director, OASIS Competency Institute, Fazzi Associates, and the many contributors at the Visiting Nurse Service of New York whose comprehensive and coordinated work on OASIS-C made this wound care education initiative possible.

*Mary Farren, RN, MSN, CWOCN, is a Certified Wound, Ostomy and Continence Nurse at the Visiting Nurse Service of New York.*

*Yanick Martelly-Kebreau, MSN, RN, CWOCN, is a Certified Wound Ostomy and Continence Nurse, Visiting Nurse Service of New York.*

*Supplemental digital content is available for this article. Direct URL citations appear in the printed text and are provided in the HTML and PDF versions*

*of this article on the journal's Web site (<http://journals.lww.com/homehealthcareonline>).*

*The authors of this article have no significant ties, financial or otherwise, to any company that might have an interest in the publication of this educational activity.*

*Address for correspondence: Mary Farren, RN, MSN, CWOCN ([mary.farren@vnsny.org](mailto:mary.farren@vnsny.org)) or Yanick Martelly-Kebreau, MSN, RN, CWOCN ([yanick.martelly@vnsny.org](mailto:yanick.martelly@vnsny.org)).*

DOI:10.1097/NHH.0b013e3182119720

## REFERENCES

- Baranoski, S., & Ayello, E. A. (2008). *Wound care essentials practice principles* (2nd ed.). Lippincott Williams & Wilkins.
- Black, J., Baharestani, M., Black, S., Cavazos, J., Conner-Kerr, T., Edsberg, L., Schultz G. (2010, April). An overview of tissue types in pressure ulcers: A consensus panel recommendation. *Ostomy Wound Management, 56*(4):28-44.
- Braden, B., & Bergstrom, N. (1988). Braden scale for predicting pressure sore risk. Retrieved from <http://www.bradenscale.com/>
- Bryant, R. A., & Nix, D. P. (2007). *Acute & chronic wounds current management concepts*. Philadelphia: Mosby Elsevier.
- Centers for Medicare and Medicaid Services. (2009a). *Outcome-based quality monitoring (OBQM) manual*. Retrieved from [http://www.cms.gov/HomeHealthQualityInits/18\\_HHQIOASISOBQM.asp#TopOfPage](http://www.cms.gov/HomeHealthQualityInits/18_HHQIOASISOBQM.asp#TopOfPage)
- Centers for Medicare and Medicaid Services. (2009b). *OASIS Q & A*. Retrieved from <http://www.qtso.com/hhdownload.html>
- Centers for Medicare and Medicaid Services. (2009c). *HHQI OASIS-C manual 200912.ZIP*. Retrieved from <http://www.cms.gov/HomeHealthQualityInits/downloads/HHQIOASIS-CManual200912.zip>
- Centers for Medicare and Medicaid Services. (2010). *OASIS Q & A*. Retrieved from <http://www.qtso.com/hhdownload.html>
- National Pressure Ulcer Advisory Panel. (2007). *Updated staging system, pressure ulcer stages revised by NPUAP*. Retrieved from <http://www.npuap.org/pr2.htm>
- Wound Ostomy Continence Nurse Society. (2009). *Guidance on OASIS-C integumentary items*. Retrieved from <http://www.wocn.org>
- Wound Ostomy Continence Nurse Society (n.d.). *Clinical fact sheet quick assessment of leg ulcers*. Retrieved from [http://www.wocn.org/pdfs/WOCN\\_Library/Fact\\_Sheets/C\\_QUICK1.pdf](http://www.wocn.org/pdfs/WOCN_Library/Fact_Sheets/C_QUICK1.pdf)

For more than 200 additional continuing nursing education articles on home healthcare topics, go to [nursingcenter.com/ce](http://nursingcenter.com/ce).