

# TLC Home Care Wound Basic Online Learning Study Guide.

## Wound Basic:

Welcome to the eLearning course titled, *Wound Basics*. This course covers the basic information related to wounds that clinicians need to know, including important patient risk factors to be aware of for developing skin breakdown and wounds. Clinicians will learn what to document in a thorough skin and wound assessment, as well as how to easily understand the phases of normal wound healing. A realistic explanation of how to recognize signs of an infected or non-healing wound is presented, along with 6 useful Tips to Promote Positive Wound Healing Outcomes for everyday practice.

**The intended audience for this course is post-acute care clinicians who care for patients with wounds.**

## Disclosures

Home Care Pulse is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

To obtain contact hours participants must view the entire course and answer the attestation question. Upon successful completion, **1 Contact Hour** will be awarded to nurses. Post-learning survey completion is required for the course to be marked as complete in the system.

Home Care Pulse reports the absence of relevant financial relationships to disclose for all persons in control of the content of this course. There was no commercial support for the development and implementation of this program.

The course has been reviewed for evidence of bias and Home

Care Pulse guarantees the absence of bias. At Home Care Pulse, we acknowledge and respect all gender identities that exist today. Gender-specific terms and pronouns may be used in order to ease the text flow of our training.

We are also using the term “*clinician*” to encompass the various roles in the post-acute setting, including nurses, therapists, social workers, counselors, and other skilled professionals. We also use the term “*patients*” to refer to the people receiving care in the various post-acute settings with the understanding that your organization may use designations like “*clients*,” “*residents*,” or “*members*.”

## Objectives

### Learning Outcome

The learner will gain an effective knowledge of wound basics as evidenced by meeting the following objectives:

- + Describe the common risk factors that patients have for developing wounds.
- + Discuss the elements of thorough skin and wound care assessments and documentation.
- + Explain the three phases of the normal wound healing process. Identify signs of an infected or non-healing wound.
- + Define the *6 Tips to Promote Positive Wound Healing Outcomes* that can be used in everyday practice.

## Course Introduction

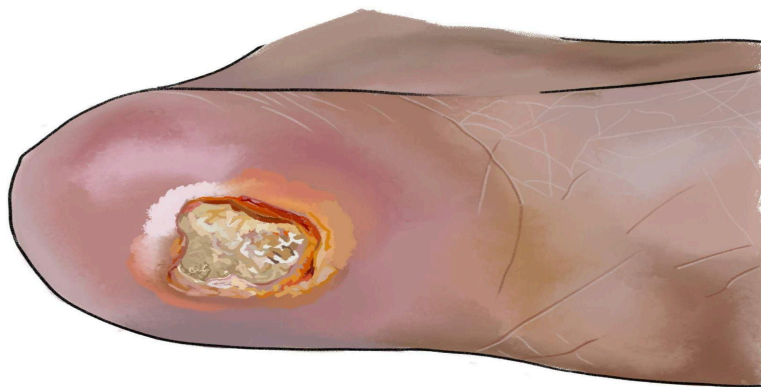
Wounds can be intimidating to some clinicians.

*"What if I don't document the wound correctly? What if I miss the signs of an infected wound? How do I know the wound is really healing?"*



In the post-acute space, there are many risk factors that patients have for developing skin breakdown and wounds. Having the skillset to assess and document wounds appropriately is important. Knowing how to recognize symptoms of infected or non-healing wounds that may need further intervention is also vital. When you understand *wound basics*, you can care for your patients with confidence. This course will teach all clinicians *wound basics* that they can use in their everyday practice to help heal wounds and improve patient outcomes.

## Unit Introduction



This unit explores the different risk factors that leave patients vulnerable to developing skin breakdown and delayed wound healing.

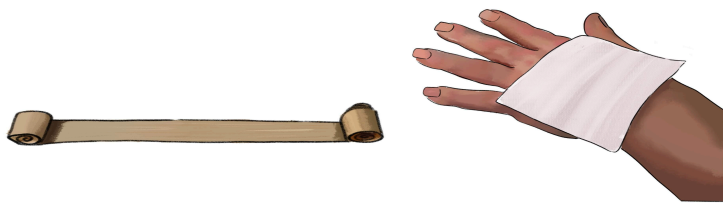
## How Long Has Wound Care Been Around?

People have been experiencing skin breakdown and wounds for a very long time.



Wound care can be traced back to ancient times when cuneiform tablets written by Sumerians around 2000 B.C. revealed that wounds and injuries were treated through spiritual incantations or by applying substances such as dust, plants, mud, milk, wine, beer, oil, honey, and flour.

Writings from the ancient Egyptians around 1500 B.C. even included differences between infected and non-infected wounds and documentation of the first wound coverings in the form of vegetable fibers.



The Greeks first identified principles of moist wound healing in writings around 120 A.D. when cotton and sponges were used to keep wounds from drying out.

Wound care then greatly evolved in the 19th century with the discovery of antiseptics that were used to clean wounds.

Now, in our current times, new innovations in wound care are being invented all the time because people are still experiencing skin breakdown and wounds. In your own practice as a clinician, you have probably already seen wound care products change and evolve as new technology advances.

## How Do Patients Get Wounds?



Skin breakdown or a new wound can occur in the patients that you are caring for every day.

Acute skin breakdown or wounds are common, such as a skin tear after a fall or a new incontinence rash.

If any skin breakdown does not heal normally within 4 to 6 weeks, it is considered chronic. Chronic wounds can be caused by immobility and circulatory issues, which we have all seen when pressure injuries occur. They can also be the result of existing disease processes that leave a person more susceptible to impaired wound healing.

It is important to know all of the risk factors that patients may have for developing wounds and experiencing healing complications. By learning these risks, you can work towards creating a care plan that effectively heals wounds and prevents further breakdown from occurring.

**Risk Factors for Developing Wounds**

### **Immobility**

**Immobility:** When people can't effectively shift their body weight, it increases the risk of pressure to bony prominences and decreases circulation. Every clinician knows the golden rule of skin care, to turn and reposition patients at least every 2 hours to prevent skin breakdown. An inability to effectively move is the top risk factor for the development of pressure injuries and other wounds.

*For example: A patient recently had a hip fracture repair and is restricted with their weight-bearing, often spending most of the day in bed recovering.*

### **Sensory Impairment**

**Sensory Impairment:** If people cannot feel parts of their body, then they may not be able to tell when a breakdown or a wound occurs, or if they are having complications in an affected area.

*For example: A patient who is wheelchair-bound cannot move or feel the lower half of their body.*

### **Impaired Cognition**

**Impaired Cognition:** Any patient who has temporary or

permanent mental difficulties that can cause them to not understand what is happening to their body is at risk for skin breakdown and wound development. If a person doesn't understand that they have developed a wound or that they need to leave a wound dressing clean and in place, delayed wound healing and infections can occur.

*For example: A patient who has a diagnosis of Parkinson's disease is deteriorating mentally and unable to understand why wound care is being done to them for a new skin tear.*

### **Poor Nutrition**

**Poor Nutrition:** Malnutrition-associated weight loss and decreased protein levels make tissues more susceptible to skin breakdown. People who have too thin of a body weight may have delayed wound healing. Conversely, people who have too much body weight or are obese often have decreased mobility, which may contribute to the development of pressure injuries, especially in bedridden patients. Additionally, moist body folds can become easily excoriated and provide a favorable environment for bacterial and fungal skin infections.

*For example: A patient with liver cirrhosis has no appetite and has been refusing meals. Supplement drinks were recently ordered, but they also refuse to drink them. Also, consider the patient who is obese and ingests too many daily calories.*

### **Incontinence or Exposure to Excessive Moisture**

#### **Incontinence or Exposure to Excessive Moisture:**

Prolonged or repeated exposure to moisture can predispose a person to severe epidermal and dermal breakdown, bacterial or fungal infections, and pressure ulcers from eroded skin. Exposure to urine and feces can also change the pH of the skin, accelerating skin breakdown. Drainage from infected wounds can also contain enzymes and harmful bacteria that can further damage surrounding skin and tissues.

*For example: A patient with dementia symptoms has trouble remembering to use the bathroom and change her brief. Often, she is found soaked in urine.*

### **Non-Intact or Fragile Skin**

**Non-Intact or Fragile Skin:** People with scar tissue from previous injuries, poor perfusion, and thin and dry skin are at greater risk for skin breakdown. Lack of moisture or dehydration can lead to

dry, flaky, scaling skin as well as cracking and fissuring of the skin surface. Severely dry skin is more susceptible to breakdown from pressure and takes longer to recover from injury.

*For example: A patient has dry, scaly skin on their arms and legs and has to be reminded frequently to stop scratching themselves.*

### **Diabetes**

**Diabetes:** Patients diagnosed with diabetes are at a high risk for the development of lower extremity injuries. Patients are predisposed to developing neuropathy that results from ischemic injury to the nerves, which causes decreased sensation and muscle atrophy in the feet and lower legs. Prolonged hyperglycemia can also lead to atherosclerosis, further decreasing perfusion to the lower extremities and increasing the risk of skin breakdown.

*For example: A patient with a diagnosis of diabetes stubbed their toe on a piece of furniture and didn't feel a large bruise that started to form on the toe and upper foot.*

### **Arterial Insufficiency**

**Arterial Insufficiency:** Patients with decreased blood flow to their arteries are at greater risk for wound formation, including arterial ulcers in the lower extremities. Chronic conditions like arteriosclerosis (artery hardening) or atherosclerosis (plaque and fat buildup in arteries), diabetes, and high cholesterol can cause arterial ischemia—meaning vessel walls can become occluded, and wound healing will be significantly impaired.

*For example: A patient has a listed diagnosis of atherosclerosis after many years of uncontrolled cholesterol and a poor, fatty diet.*

### **Venous Insufficiency and Lymphedema**

**Venous Insufficiency and Lymphedema:** Poorly functioning valves in the lower extremity venous system, along with dysfunction of the calf muscle pump can lead to edema, thickening of skin, pigment changes (known as hemosiderin staining), and dry, scaly skin. Severe edema can make the skin split open and weep, causing venous stasis ulcers. Occluded vessels and decreased venous return also cause a collection of fluid in lymph vessels, which creates lymphedema and a greater propensity to develop wounds.

*For example: A patient has been complaining of excessive swelling to the left leg and also mentioned that the skin on their legs appears to be oddly darker*

*in color in recent weeks.*



### **Prolonged Steroid Use**

**Prolonged Steroid Use:** People who take steroids can develop dysfunctional epidermal regeneration and collagen synthesis abilities, which can increase the risk of skin breakdown and slows the rate of wound healing significantly. For patients diagnosed with auto-immune conditions, cancer, or who are recovering from organ transplants and taking steroids, wounds can become common and difficult to treat.

*For example: A patient has a chronic disease diagnosis of the autoimmune disease Lupus Erythematosus and sporadically takes prednisone to help manage her symptoms.*

### **Advanced Age**

**Advanced Age:** Advanced age is often associated with limited mobility, dry skin, reduced skin turgor, and sometimes poor nutrition. Many chronic illnesses and long-term use of medications may also contribute to skin breakdown and delayed wound healing.

*For example: A patient is 95 years old and frequently has bruises and little scratches to his upper arms from little injuries moving about and completing tasks.*

### **Lifestyle Choices**

**Lifestyle Choices:** Lifestyle choices that people make, such as excessive alcohol intake or smoking, can cause skin and wound problems. Alcohol can induce digestive and liver problems that can cause malnutrition and anemia, which significantly impairs wound healing. People who smoke are at great risk for non-healing wounds because of the caustic chemicals found in nicotine-based products. Also, lifestyle choices to have poor hygiene and refuse care for skin and wounds can cause great compromise.

*For example: A patient smokes a pack of cigarettes a day and frequently refuses to shower or change their clothes.*

### **Stress**

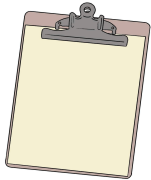
**Stress:** Emotional, physical, and even financial stress can all affect a person's body. Immune systems can decline when the body is under any kind of stress and wound healing can become delayed.

*For example: A patient was recently diagnosed with depression following the death of her husband and often does not want to participate in activities, often sitting all day in her recliner.*

Your patients can have more than one risk factor for skin breakdown. Know their risks, ensure they are well documented, and collaborate with your team to change any factors that are modifiable. Also be sure to always perform thorough skin and wound assessments.

We will explore more about assessing wounds in the next unit and later discuss skin breakdown and wound prevention measures, but first—let's check your knowledge of risk factors:

## Unit Introduction



This unit investigates the importance of proper skin and wound assessment and documentation in everyday practice.

## Skin Assessments



It seems easy to document a skin assessment; you can just look and document what you see.

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*Skin is either intact or it's not, right?*

**Not exactly!**

While inspection is important, so is feeling the skin for temperature changes and other important factors. Whether a patient has a wound or not, you should be thorough in how you perform and document routine skin assessments of their body. Make sure that you include the following in every skin assessment:

### **Color**

Check for any differences in skin color or pigmentation in all body areas, including upper or lower extremities. Check general pallor, as well as any signs of cyanosis or erythema.



### **Moisture**

Note any dry areas and any skin noted to have excessive sweat present.

### **Temperature**

Identify any areas of noticeable warmth or coolness.

### **Texture**

Examine the skin to see if there is any evidence of abnormal raised or scarred areas on the skin. Watch for any new lesions or rashes.



## Temperature

Feel skin areas for any areas of warmth or coolness. Further, assess pulse locations closest to any areas of odd temperature and check the same pulse locale on the opposite side of the body to determine any circulation discrepancies.

## Turgor

Check for skin elasticity by gently pinching and pulling the skin on the top of the hand. If skin does not return to normal position in 1 to 2 seconds and remains tented, it may indicate dehydration issues.

## Edema

Inspect for any areas of skin that are collecting fluid or swollen. Compare both sides of the body in similar locales. Ask patients if they feel any “tight” areas of skin that may indicate edema is present.



## Sensation

Ask patients if any areas of their skin are causing them pain or discomfort. Also ask if they are not having sensation or feeling in any location or feeling numbness or tingling in any skin locations.

## Wound Assessments



After you carefully document your skin assessment, move on to any needed wound assessments. There are several tools available to help clinicians thoroughly document areas of skin breakdown and wounds.

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It is important to be detailed and accurate, so it is clear as to whether or not wounds are actually healing. Think about someone reading your documentation. You must paint the picture of exactly how the wound is progressing, so that anyone can read your documentation and have a clear description. You likely have wound assessment tools built into your documentation already. Make sure that you know how to document wounds based on your organization's policies. Consider a commonly used tool, known as the [Bates-Jensen Wound Assessment Tool \(BWAT\)](#)

Item	Assessment	Date/Score	Date/Score	Date/Score
<b>1. Size</b>	<ul style="list-style-type: none"> <li>1 = Length x width &lt; 4 sq cm</li> <li>2 = Length x width 4--&lt; 16 sq cm</li> <li>3 = Length x width 16.1--&lt; 36 sq cm</li> <li>4 = Length x width 36.1--&lt; 80 sq cm</li> <li>5 = Length x width &gt; 80 sq cm</li> </ul>			
<b>2. Depth</b>	<ul style="list-style-type: none"> <li>1 = Non-blanchable erythema on intact skin</li> <li>2 = Partial thickness skin loss involving epidermis &amp;/or dermis</li> <li>3 = Full thickness skin loss involving damage or necrosis of subcutaneous tissue; may extend down to but not through underlying fascia; &amp;/or mixed partial &amp; full thickness &amp;/or tissue layers obscured by granulation tissue</li> <li>4 = Obscured by necrosis</li> <li>5 = Full thickness skin loss with extensive destruction, tissue necrosis or damage to muscle, bone or supporting structures</li> </ul>			
<b>3. Edges</b>	<ul style="list-style-type: none"> <li>1 = Indistinct, diffuse, none clearly visible</li> <li>2 = Distinct, outline clearly visible, attached, even with wound base</li> <li>3 = Well-defined, not attached to wound base</li> <li>4 = Well-defined, not attached to base, rolled under, thickened</li> <li>5 = Well-defined, fibrotic, scarred or hyperkeratotic</li> </ul>			
<b>4. Undermining</b>	<ul style="list-style-type: none"> <li>1 = None present</li> <li>2 = Undermining &lt; 2 cm in any area</li> <li>3 = Undermining 2-4 cm involving &lt; 50% wound margins</li> <li>4 = Undermining 2-4 cm involving &gt; 50% wound margins</li> <li>5 = Undermining &gt; 4 cm or tunneling in any area</li> </ul>			
<b>5. Necrotic Tissue Type</b>	<ul style="list-style-type: none"> <li>1 = None visible</li> <li>2 = White/grey non-viable tissue &amp;/or non-adherent yellow slough</li> <li>3 = Loosely adherent yellow slough</li> <li>4 = Adherent, soft, black eschar</li> <li>5 = Firmly adherent, hard, black eschar</li> </ul>			

The BWAT is a gold standard model developed by Dr. Barbara Bates-Jensen that has been in use for decades in health care. The BWAT contains 13 key wound characteristics that are each assigned an individual 1–5 score, with a higher score indicating a more severe characteristic. Clinicians score each of the 13 descriptive areas, which combined create an overall **wound status continuum** score that can be examined over time to help determine quantitatively if a wound is showing improvement in its numeric BWAT score and its healing status.

Whether or not you utilize the BWAT, take a look at the structure of the tool and consider the **core characteristics** that are used to evaluate and document a thorough wound assessment:

## Size

**Every wound should be measured with a disposable ruler in centimeters**, clearly documenting the longest and widest parts of the wound surface. Make sure you know your organization's policy for measuring and documenting wounds.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15														
Wound Measuring Ruler					Wound Size					CENTIMETERS				
Patient Name: _____					Length _____					_____				
Date: _____					Width _____					_____				
					Depth _____									

## Depth

**The depth and thickness of every wound should be documented**, from non-blanchable erythema on intact skin to full-thickness skin loss with extensive surrounding structure involvement. The default measurement for wounds without quantifiable depth is **0.1 cm**.

## Edges

**Include whether the edges of a wound are well-defined and attached to the wound base.** Irregularities to wound edges, such as evidence of rolling under (also known as epibole) or scarring can indicate potential infection or delayed wound healing.

## Undermining

**Always document if pockets of dead space exist between the top layer of surrounding wound skin and other underlying tissues.**

Measure these undermining areas carefully if able or estimate the amount of involved margins and be clear about the location of undermining. Tunneling is another type of dead or destroyed tissue that extends further away from wound surfaces than areas of undermining and creates potential abscesses or pockets of infection.

## Necrotic Tissue Type

**Necrotic or dying wound tissue begins with the formation of slough**, which is loose, stringy material made of decaying cells that

will begin to cover non-healing wounds. Slough is white/grey or yellow and will turn black into a hardened eschar in severe wounds.

### **Necrotic Tissue Amount**

**The amount of necrotic tissue present is very important to document**, to indicate how much of the wound is involved and whether later debridement may be warranted. Debridement is the physical removal of necrotic tissue to expose live wound tissues and promote healing. Often, only specially trained providers can perform a debridement.

### **Exudate**

**The amount of exudate or drainage from a wound is important to track.** Excessive drainage may be related to the type of wound, such as weeping venous ulcers, or may indicate that an infection may be developing in the wound. Also, note the color and clarity of the drainage—which may help signal changes that can also mean an infection is forming.

### **Skin Color of Surrounding Tissue**

It is important to assess whether surrounding tissues near a wound are **normal and blanching** or becoming **white or grey** and even **purple or black**, indicating nearby tissue compromise is occurring.

### **Peripheral Tissue Edema**

**Monitor every wound for the presence of any swelling or non-pitting edema**, as well as areas of pitting or crepitus around the wound area. Remember that crepitus is pockets of air under the skin around the periwound that feels like bubble wrap or crinkled paper and indicates edema and potential undermining around the wound.

### **Peripheral Tissue Induration**

**How far edema is indurating or extending beyond a wound is also important to document**, whether in centimeters or by an estimate in relation to the percentage around the wound itself.

### **Granulation Tissue**

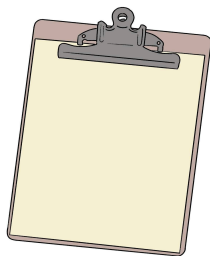
**The estimated percentage and color of granulation tissue should always be documented.** Granulation tissue is comprised of small blood vessels and connective tissues that cover full-thickness wounds and indicate proper healing when they have a beefy red, shiny

appearance. Non-healing wounds often become pink, dusky red, or grayish and indicate a poor vascular supply.

### **Epithelialization**

**It is important to document the percentage of epithelialization or wound resurfacing that is occurring.** This will indicate whether a wound is healthy and growing new skin cells or compromised and having delayed healing.

### **BWAT**



In addition to thorough skin and wound assessments, also make sure you document per your organization's policy the following:

- + Details of any wound care performed.
- + The patient's response or tolerance of any wound care.
- + Any teaching provided to a patient or their caregivers about skin or wound care.
- + The patient or their caregiver's ability to manage any needed skin or wound care tasks.
- + The presence of any ordered interventions to promote wound healing or reduce risk factors for skin breakdown.

When clinicians document thorough skin and wound assessments, it makes the process of monitoring wound healing easier. Make sure you understand your organization's policies for documenting skin and wound assessments and keep tools like the BWAT in mind when charting important wound characteristics.

Let's check your knowledge of skin and wound assessments.

## **Unit Introduction**



This unit explains how to understand the phases of normal wound healing, as well as how to recognize the signs of an infected or non-healing wound.

## Phases of Wound Healing: A Practical Explanation



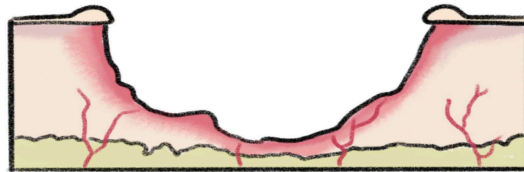
Over the years, much research has been done to determine the difference between a healing and a non-healing wound. Healing wounds have low levels of proteins and enzymes that cause inflammation and destroy good tissue and high levels of growth factors. Non-healing wounds, on the other hand, are often described as being “stuck” because they are not progressing normally in the normal phases of wound healing.

What are these phases of wound healing and what should you know about them?

### **Phase 1: The Inflammatory Phase- Week 1**

Right after a patient has skin breakdown or a wound develops, the body immediately reacts in the inflammatory phase:

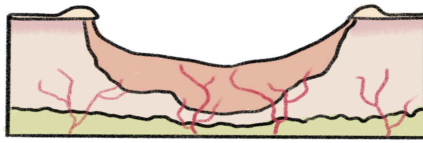
- The body typically will immediately control any bleeding by constricting local blood vessels and sending platelet cells to form any needed blood clots.
- Various types of white blood cells migrate to the wound and protect the body from bacteria.
- Salts, proteins, enzymes, and other chemical mediators begin to form a local community and start producing growth factors for use in phase 2.



### **Phase 2: The Proliferative Phase- Week 2 to 3**

Over the next approximately 2–3 weeks, wounds are in the process of rebuilding or proliferating their tissues. There are four stages to proliferation:

- **Angiogenesis:** New blood cells, capillaries, and other vasculature needed, are formed.
- **Granulation:** Granulation tissue creates a temporary lattice-like framework to cover wounds with healthy scar tissue.
- **Contraction:** Cellular defects from wounds decrease and specialty fibroblast cells fill in wound space more completely.
- **Epithelialization:** Wounds become resurfaced with keratinocyte cells. Moist wound environments allow epithelial cells to move and rebuild along the surface.



### **Phase 3: The Maturation or Remodeling Phase- Week 3 and Beyond**

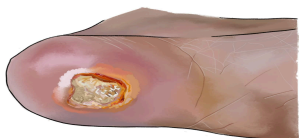
Once an initial scar is formed and a wound is covered, it will continue to mature and become fully healed after the third week:

- Granulation tissue composed of keratinocytes becomes replaced with a new collagen framework of cells for the final, healed layer of protection.
- Immature scars appear red, raised, and sometimes hard or rigid to the touch.
- Mature scars are pink or skin tone in color, softer, and less raised.
- Remodeling of the outer framework of a healed wound can take up to two years.



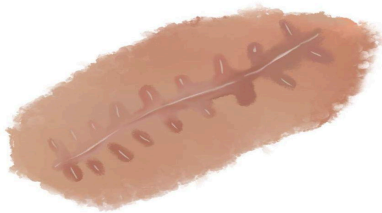
#### **Also, good to know:**

Wounds that heal by **primary intention** are considered to have sharp or well-approximated edges and are without bacteria. Surgical wounds or clean, mild trauma wounds that require sutures, staples, or skin adhesives all heal by **primary intention**.



Wounds that occur with more excessive tissue loss and have edges that cannot be closed or approximated heal by **secondary intention**. When a wound has some bacteria present and requires dressings, negative pressure therapy, and other methods to promote healing, it heals by **secondary intention**. Wounds that require a combination of delayed surgical intervention or ongoing negative pressure device use and multiple longstanding wound care treatments are considered to heal by **tertiary or delayed primary intention**. Wounds that require debridement also heal by **tertiary intention**.

## Signs of Infected or Non-healing Wounds



A positive outcome for a patient is when a condition like a wound moves through the phases of the healing process normally, and treatment care plans are effective.

As a clinician, not only do you need to be skilled in your skin and wound assessments of patients, but you also need to be sure that you are confident in how to recognize signs of infected or non-healing wounds. Early intervention to obtain new wound care treatment orders is vital to preventing severe wound compromise and maintaining positive outcomes.

Know the most common signs of infection or non-healing to look for:

### Redness and Swelling

**Slight pink or reddish color to surrounding areas of a wound, particularly after trauma is normal.** However, excessive redness or

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swelling around a wound is not normal and may indicate infection. Red streaks around wounds are also telltale signs of infection.

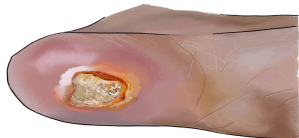


### **Irregular Drainage**

Some wounds will be moist and have a **clear or serous** (pale yellow) or **serosanguineous** (light pink) drainage or exudate as they heal and form new blood vessel components to fill in the wound. You should not expect to see **cloudy yellow or green drainage** from a wound, known as **purulent discharge**. Foul-smelling drainage can also indicate infection.

### **Texture Changes or Maceration**

**Along with irregular drainage, if a wound becomes macerated, it means there is excessive moisture compromising the wound and likely delaying healing.** Maceration will appear soggy and is a paler or white shade that will form on the skin around a wound. Other texture changes to the wound itself or surrounding skin, such as pimple-like crusting or multiple soft scabs may indicate potential infection or non-healing.



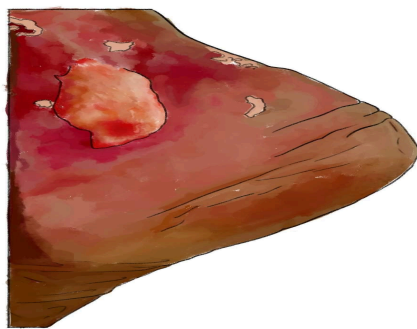
### **Temperature Changes**

**Coolness to surrounding skin or the wound itself can indicate a lack of proper circulation and delayed or non-healing wound status;** while warmth or hotness felt to surrounding skin or wounds is a hallmark sign of infection. Also, remember that a generalized fever in a patient may indicate an infection is present.

### **Pain**

**If a wound becomes more painful or begins to throb, and it does**

**not decrease as the wound heals, it can mean an infection is forming.** Pain can also mean that wound healing is delayed because there is another problem, such as an adverse reaction to a particular dressing. Wounds should also not continue to be painful with the use of pain medication and the discomfort must be documented and reported immediately.



### Swollen Lymph Nodes

**The body has approximately 600 lymph nodes, which can become enlarged and inflamed when a nearby infection is present.** They can also become sore generally or painful to the touch when they are inflamed. Feel for any swollen or painful lumps near wounds that may indicate an infection is present in the body. Remember, if you suspect a wound is infected or delayed in the normal healing process, report it immediately to the patient's attending provider for discussion and potential new wound care orders. Rely on your entire team to adapt the patient's care plan and promote wound healing.

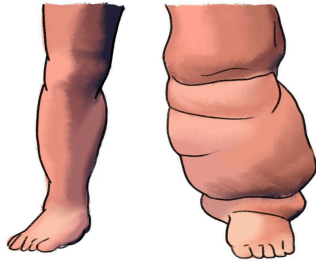
Before we learn how to create those positive outcomes, let's check your knowledge of healing versus non-healing wounds.

### Unit Introduction



This unit explains practical tips that can be employed every day to help heal existing wounds and promote positive outcomes for patients.

### Assess and Determine



Now that you know how to determine possible risk factors for your patients developing skin wounds and whether a wound is infected or not healing, what is left?

#### **Prevention!**

All clinicians should know how to prevent skin breakdowns and wounds before they occur. The most positive outcome is proper prevention of illness or injury.

Remember that some of the patient risk factors you learned about are **modifiable**: meaning you can help directly reduce or even completely resolve their impact. Other times, patients have diseases, conditions, or even lifestyle choices that are **nonmodifiable**: meaning you cannot resolve them completely.

Recall the risk factors for skin breakdown or wound development:

- + Immobility
- + Sensory Impairment
- + Impaired Cognition
- + Poor Nutrition
- + Incontinence of Exposure to Excessive Moisture
- + Non-intact or Fragile Skin
- + Diabetes
- + Arterial Insufficiency

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- + Venous Insufficiency and Lymphedema
- + Prolonged Steroid Use
- + Advanced Age
- + Lifestyle Choices
- + Stress

### **Lessen the Impact**

You can still help lessen the impact of all of these risk factors and keep your patients safer and healthier.



#### **Think About It...**

If a patient has been diagnosed with diabetes, you cannot change their risk factor for developing neuropathy and lower extremity ulcers, but you can encourage them to make healthy diet and lifestyle choices and keep their blood sugar under control. You can also teach them to check their own skin frequently and watch closely for any skin concerns.

#### **Think About It...**

If another patient is of an advanced age with frail skin and prone to slips and falls, you cannot change their age or weakness necessarily, but you can encourage them to use their assistive devices and be more cautious of their environment. You could also make sure furniture in their area has no sharp edges, trip hazards are removed, and teach them how to keep their skin hydrated.

### **Tips to Promote Positive Wound Healing Outcomes**

In your everyday practice, try these *tips to promote positive wound healing outcomes*:

### **Ensure Everyone is Educated**

- Identify all of the risk factors that your patient has and talk about them together. Involve the entire care team, including the patient and anyone that helps care for them. Determine what interventions can be done to reduce or resolve the risks.
- Consider adapting your care plan to include existing disease process education as appropriate, for patients struggling to manage any current conditions.
- If your patient does have an existing wound, educate them about their wound care and why it is important to follow orders and promote wound healing. Don't forget to also make sure they have proper hygiene and adequate skin care routines in place as part of their care plan.

### **Properly Assess Every Patient's Skin and Wounds**

- Consider tools like the BWAT to help you incorporate key documentation pieces into every assessment. Otherwise, be sure you know how to use your organization's preferred tool and are always documenting thoroughly.
- Report any new skin concerns immediately including dry or irritated skin, and any new rashes, open areas, or abnormal skin colorations.
- Report any new wound concerns immediately including signs of infected or non-healing wounds.
- Redness, swelling, irregular drainage, texture changes or maceration, temperature changes, pain, and swollen lymph nodes should all be identified and reported.

## **Provide Adequate Wound Care Including Moisture Control**

- Make sure wound dressing supplies are being properly used per orders and that surrounding skin is not compromised.
- Monitor wounds closely to make sure there is not a need for new orders to accommodate a different dressing to address absorbency. It's possible to need a dressing that absorbs more exudate just as it is possible to need a dressing with emollients or other additives to promote a moist environment for healing.
- Collaborate with your team and the attending provider to make sure you have the optimal wound care orders in place for every patient.

## **Maximize Every Patient's Nutrition & Hydration Balance**

- Healthy eating habits are important for everyone. Eating too much or too little can cause further skin breakdown and complicate existing wounds. When a patient has an existing wound, they need to stay hydrated and have plenty of nutrients available to promote adequate healing.
- Encourage your patients to eat well-balanced meals and drink plenty of fluids. If your patients have special diets, make sure they are adhering to them. Talk to them and make sure they understand the importance of their nutrition and hydration balance.
- Collaborate with your team if your patient has deficiencies in their diet and needs help getting more nutrition, or if they need help with obesity and losing weight.

## **Monitor the Safety of the Environment**

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- Many wounds are the result of trauma related to falls and bumps, cuts, and abrasions from hazardous surfaces in the environment. Work with your patient and their caregivers to implement safety measures like padding sharp furniture edges, removing scatter rugs and other tripping hazards, and adding handrails where possible.
- Always perform any skin or wound care with an aseptic technique to prevent contamination. Try to perform all care in clean spaces and remove any items that may cause bacteria to enter the wound. Think of a patient lying on dirty bed sheets, change the linens before you perform care or use a barrier cloth to protect your working space. If you can assist the patient to live in a more sanitary environment or teach them how to clean their living spaces, add that to your plan of care.
- Safe positioning and mobility are also important parts of every patient's environment. Whether patients are at home or in a facility, make sure every care team has a protocol in place to keep patients frequently turned and safely mobile.
- Ensure patients can comfortably reposition themselves at least every two hours, with pressure offloaded from bony prominences and pillows, wedges, and other support items added as needed.
- If your patient uses an assistive device or wheelchair to ambulate, inspect the environment for a safe path. Bumping into hazards or falling because of unsafe device use can cause injuries and skin trauma.

### **Discuss Healthy Lifestyle Choices**

- Talk to your patients about healthier lifestyle choices. Poor diet, smoking, and excessive alcohol use are all choices that can intensify the risk of having skin breakdown or developing infected or non-healing wounds. Patients who refuse to adhere to medication

regimes and have uncontrolled diseases also risk compromise. Even not addressing emotional, physical, and financial stress can be risky.

- Provide support to your patients and collaborate with your team to address the lifestyle changes that they are willing to make to improve outcomes.
- Do not force or admonish a patient who does not want to make healthier lifestyle choices; just be sure they understand any potential consequences related to their care.

Keep the *Tips to Promote Positive Wound Healing Outcomes* in mind every day as you care for patients:

- + Ensure everyone is educated.
- + Properly assess every patient's skin and wounds.
- + Provide adequate wound care including moisture control.
- + Maximize every patient's nutrition and hydration balance.
- + Monitor the safety of the environment.
- + Discuss healthy lifestyle choices.

To put those tips to use, let's answer a few thought-provoking

### **Wrap-Up**

Now that you have mastered wound care basics, remember to always perform thorough assessments on existing wounds and monitor them carefully for signs of infection or non-healing. Think about the normal healing process, including interventions you can do to prevent skin breakdown or wounds before they occur. Always adapt your wound care plans with your healthcare team to make sure you are addressing individual risk factors and striving to create the best, positive outcome for every patient.

### **Authorship**

**Wendie Colvin, MSN, RN,  
Senior Nurse Educator**

## TLC HOME CARE

Mrs. Colvin is a Senior Nurse Educator for Home Care Pulse. She is a subject matter expert in many facets of community health nursing, from acute care emergency medicine to home health and hospice. She has practiced at the bedside in multiple settings and has nearly a decade of experience in the acute care emergency medicine arena, later transitioning to the post-acute space. During her tenure over the last several years as a manager and educator in both home health and hospice spaces, Mrs. Colvin earned her Master's of Science in Nursing with an education focus from Walden University. She has created dozens of educational lectures and webinars, as well as role specific training tools and orientation programs for home health and hospice clinicians and various post-acute care partners. Mrs. Colvin now focuses on creating quality eLearning courses and training items that teach every clinician and care professional how to give the best quality of care to every patient in the post-acute space.

**Lu Post, RN, MN, COS-C,  
Home Care and Hospice Clinical, Operational, and  
Educational Consultant  
President, Home Care Institute, LLC**

Ms. Post had over 30 years of home care and hospice experience, largely in senior leadership and educational roles. In addition, she had over 25 years of experience in the field of educational technology and instructional design. Ms. Post had a Master's of Nursing degree from Emory University as a Clinical Nurse Specialist and a second Masters in Education.

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