WOUND CARE MANUAL

Wound Care

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INTRODUCTION: THE WOUND CARE INDUSTRY

PURPOSE:

There is an increase in the demand for treatment and care for people who have developed and/or are living with wounds.

This guide is for the provider/supplier who is looking for an effective way to enter the wound care market and serve patient needs.

DEMOGRAPHICS:

Growing elderly population: The growth rate of the over-65 age group for the next 20 years is nearly triple that of the under-65 age group. As we age, our skin is more susceptible to skin breakdown.

Escalating costs across all health care settings: In addition to the increase in the elderly population, there is another factor that brings wound care to the forefront—escalating costs. More than 10 million Americans, mostly elderly, suffer from slow-healing or non-healing chronic wounds.

The growth of diabetes: One of the major contributing factors to the continued growth of non-healing chronic wounds is the increased prevalence of diabetes. More than 29 million Americans have diabetes, and 1 in 4 doesn't know it. Another 86 million adults—more than one in three U.S. adults—have pre-diabetes, where their blood sugar levels are higher than normal but not high enough to be classified as type 2 diabetes. Compounding the problem is the recidivism rate: some wound care experts estimate that 70 percent of all chronic wounds eventually re-open.

Standards have changed: The legal implications and cost of wounds have been brought to the attention of facility administrators. The total impact on the health care system is more than $1 billion per year. Very rarely are patients able to work, because these open wounds require constant care and cause significant disability.

There are other demographics that contribute to the growing awareness of wound care, but we will focus on the factors listed above.

[Elderly people, diabetics, immuno-suppressed, and immobilized individuals have an increased incidence of chronic wounds and other dermal afflictions that result from poor circulation and immobility (e.g., pressure injuries, venous stasis ulcers, and neuropathic/diabetic wounds). These chronic conditions greatly increase the cost of care and reduce the patient's quality of life. As these groups increase, the need for advanced wound care products will increase.]

INTRODUCTION TO THE WOUND CARE INDUSTRY

Every year, nearly one million Americans develop chronic wounds. The total direct cost of chronic wounds in America, including wound diagnostics, surgical procedures, pharmaceuticals, wound closure devices, and hospital and physician charges amounts to an estimated $20 billion annually. This estimate does not include the indirect costs of chronic wounds, such as lost work time and impaired quality of life.

Chronic wounds have a profound effect on the quality of life for individuals who have to live with them on a daily basis. Wounds are often complex and difficult to heal, and pose a huge financial burden to the health care system. Chronic wounds will continue to drive escalating health care costs as the population ages and chronic diseases that contribute to wound development increase. Chronic wounds are a challenge across all health care settings.

Quality of life can be affected because of:

- Reduced physical ability
- Diminished social functioning
- Poor body image
- Loss of independence and control over patients' lives

THE IMPORTANCE OF THE WOUND CARE MARKET

An estimated $50 billion per year is spent on caring for these wounds directly and indirectly. That's 10 times more than the annual budget of the World Health Organization. With better education and the advancement of new wound care technologies, we as health care professionals can impact our patients and the money spent on wound care.

VGM Group, Inc. encourages members to be on the cutting edge of this market in their geographic area and actively pursue the wound care arena. As wound care providers, we must continually look for better wound care modalities and therapies for our patients.

PHYSIOLOGY OF TISSUE REPAIR

This information is important for the home medical equipment provider to understand in order to assist the customer in choosing the correct wound care product for their situation.

The skin is the body's largest organ, and its primary function is to protect us from bacterial and viral pathogens, ultraviolet radiation, water, and mechanical and chemical assaults.

The skin provides thermoregulation of the body by maintaining body temperature.

Sensory receptors in the skin allow input for touch and pain throughout the body. Synthesis of vitamin D occurs in the skin with the presence of sunlight. The skin plays a very vital role in our life and serves many complex functions.

When there is injury to the skin, a series of events takes place. No matter what the cause, tissue repair undergoes three distinct overlapping phases of wound healing. It's important for us to know how wounds heal to pinpoint why a wound won't heal.

PHASE I

The first phase in the repair process is inflammation. You may see this phase from the outside as swelling and redness. This phase typically begins the first day of injury and lasts approximately four to six days. The body is cleaning the wound in this phase.

At the beginning of the inflammatory phase, platelets are released and blood vessels constrict to prevent excess of blood and fluid loss. After the bleeding has stopped, vasodilatation occurs and the blood releases plasma, which in turn increases the transport of vital nutrients and cells to the injury.

During this first phase of healing, many cell mediators are released that play a very important role in the entire healing process.

Leukocytes arrive within the first 24 hours of injury. The responsibility of the leukocytes is to clean up the bacteria and foreign debris at the wound.

If the inflammatory phase is prolonged and wound healing is delayed, there may be a problem such as infection or necrosis. Before this wound can enter into the next stage of healing, the problem must be taken care of or it will never get past the first stage.

PHASE II

Proliferation is the second phase in wound repair when the vascular components of the skin are restored. In this phase of healing, granulation tissue is formed and epithelialization begins. Granulation tissue is mostly made of capillary loops and connective tissue proteins also known as the extracellular matrix (ECM). Fibroblasts are responsible for the synthesis of collagen and other connective tissues. Wound contraction also occurs with the help of myofibroblasts. The proliferation phase usually lasts from day six to around day 25.

PHASE III

The final stage is considered the maturation or remodeling phase. During this phase, the tensile strength of the wound matrix is being built stronger and stronger. The epithelial cells begin to migrate across the granulation tissue that was formed in the proliferation phase. After the granulation tissue is covered completely with epithelial tissue, a scar is produced. The processes that happen next may last up to two years. There is a constant breaking down and building up of the collagen tissue to help build its strength. The tensile strength of the collagen matrix will never regain 100 percent of its original strength.

It's important for us to know the phases of wound healing to pinpoint why a wound won't heal. It's "stuck" in one of the phases of the healing and repair process. There are various factors that cause it to get "stuck" that will be discussed later.

PRINCIPLES OF WOUND CARE

It's important to involve all the members of a health care team in the management and treatment of wounds. There are many reasons why a wound won't heal. It's not one isolated event.

Everyone plays a very significant part and brings their expertise into play. All the patient's physiologic needs should be addressed in a holistic manner. We understand the majority of the home medical equipment providers are not going to clinically assess and treat the customers, but again, this is pertinent information for you to understand when recommending a wound care product.

There are three major principles to wound healing when it comes to wound management.

THE FIRST PRINCIPLE of wound management is to control or eliminate causative factors. Before treating a wound, it needs to be known how the wound originated or what the underlying cause is. The initial assessment and patient history is crucial to help determine the cause or what co-factors are precipitating the wound. Diagnostic tests may be performed to accurately identify the cause. After the causative factors have been identified, action must be taken to control or eliminate them. Failure to address these issues will result in delayed healing or a non-healing wound, no matter what management or treatment option is used.

Some causative factors may be but are not limited to:

- Moisture
- Circulatory compromise
- Shear
- Pressure
- Friction
- Neuropathy

Some of the management actions to help with the above causative factors may be but are not limited to:

- Promote blood flow to ischemic areas (e.g., hydration, smoking cessation, discontinue the use of caffeine and avoid cold temperatures).
- Reduce pressure and repetitive stress by offloading or frequent turning and repositioning.
- Reduce friction and shear by using:
    - » Heel protectors or socks
    - » Turn sheet or trapeze
    - » Light dusting of powder or cornstarch on sheets
    - » A vapor-permeable cover when patient is on a low air loss mattress

ASSESSMENT AND MANAGEMENT FOR THE FIRST PRINCIPLE

Where did the wound come from?

- Pressure

- Shear
- Friction
- Moisture
- Circulatory impairment
- Neuropathy

STEPS TO TAKE TO CONTROL OR ELIMINATE CAUSATIVE FACTORS:

- Offload – reduce pressure, maintain head of bed at 30 degrees or less. Use positioning devices between bony prominences.
- Proper positioning and repositioning and use of support surfaces for both bed and chair.
- Mechanical factors (shear, friction) – use trapeze, socks or heel protectors, knee gatch when HOB is elevated, light dusting of powder or cornstarch on sheets.
- Compression – to reduce venous hypertension
- Blood flow
    - » Hydrate
    - » Avoid cold
    - » Avoid caffeine and nicotine
- Education
    - » Avoid trauma
    - » Avoid foot soaks
    - » Don't use antiseptic cleansers or solutions that don't promote wound healing for an extended amount of time

THE SECOND PRINCIPLE is to provide systemic support to reduce existing and potential co-factors. You can be doing everything right for the patient, but if they do not have adequate levels of nutrition, oxygen, and cell mediators, tissue repair is going to be slow. When assessing the patient, make sure a thorough evaluation of the major systems are performed. Assessment factors may include the following:

Cardiovascular

- » Blood pressure
- » Distal pulses
- » Capillary refill
- » Temperature changes
- » Edema

- Pulmonary
    - » Pallor
    - » Respiratory rates

    - » PO2 (partial pressure oxygen)
- Nutritional and fluid status – good nutrition is essential to build up cells to repair the wound.
    - » Weight
    - » Laboratory indicators
- Albumin
- Transferrin
- Pre-albumin
- Current caloric intake
- Joint edema
- Hair loss or sparse
- Dry skin
- Lethargy
- Other factors:
    - » Diabetes
    - » Immunosuppressant
    - » Corticosteroid usage
- Medications – Various medications can affect circulation and other factors vital to proper wound healing.

ASSESSMENT AND MANAGEMENT FOR THE SECOND PRINCIPLE

- Nutrition and fluid status: The most frequently cited cause of pressure injuries is poor nutrition. Poor nutrition is the leading cause of ulcers in nearly 30 percent of cases and a contributing cause in 61 percent (Voss).
    - » Actual weight versus ideal weight
    - » Albumin, transferrin, and pre-albumin values
    - » Calorie and protein intake
    - » Vitals – blood pressure, pulse, respiratory rate, distal pulses, temperature
    - » Diabetes
    - » Corticosteroids
    - » Immunosuppressant
    - » PO2, capillary refill and pallor
- Edema
    - » Presence or absence
- Control of systemic conditions affecting wound healing

- Tissue Oxygenation
    - Hydration
    - Elevation of edematous extremities
    - Oxygen administration
- Nutritional deficiencies
    - Dietary support
        - Supplementation
        - Oral, enteral, parenteral support
        - Tube feedings
        - TPA
        - Synthetic steroids - Oxandralone
- Moisture control – Skin cells thrive when the moisture balance is right.
    - Incontinence
        - Bowel training program
        - Prompted voiding
        - External collection devices
        - Skin care
- Wound-healing deterrents
- Blood glucose control

THE THIRD PRINCIPLE is to maintain a physiologic local wound environment. A physiologic wound environment is what we want to accomplish—not too wet and not too dry. In order to address this third principle, the wound environment needs to have adequate moisture, temperature, pH, blood supply, and control of bacterial burden.

Adequate Moisture Level

The human body is more than 65 percent water. The main source for maintaining the body's moisture lies within the epidermis. When the epidermis or dermis is damaged or removed, tissues and cells experience an increased loss of water vapor. A wound dressing functions as the top layer of the skin and helps "catch" the moisture vapor that is escaping the wound on a continual basis. The wound dressing functions as a barrier to water vapor loss.

Normal Temperature

For a wound to heal properly, it must be as close to normal body temperature as possible. All the cell mediators work best in a warm environment. Each time a dressing is removed from a wound, the temperature drops, causing cellular activity to slow. The longer it is possible to keep a dressing on a wound, the better.

pH

If the pH is altered too much or too little, the healing time will be affected. Substances such as feces, urine, and bacteria will affect the pH. If the pH in the wound is too high, it can be toxic to the wound. If the pH is too low, cellular functions are affected.

Bacterial Balance

For a wound to heal properly, it needs to be free of excess bacteria. Various strategies for achieving the right bacterial balance are as follows:

- Remove non-viable tissue
- Use appropriate wound cleansing
- Adhere to the proper infection control measures
- Use antimicrobial dressings when indicated

ASSESSMENT AND MANAGEMENT FOR THE THIRD PRINCIPLE

- Keep wound tissue as close to normal body temperature as possible – 98.6˚F or 37˚C. All cellular functions are affected by temperature.
- Keep a moist wound-healing environment. In the presence of a wound, the stratum corneum (top layer of the epidermis) prevents loss of water in the form of water vapor to the external environment. Skin hydration levels are maintained by the stratum corneum. In the absence of this layer, a wound dressing is a substitute. Semi-occlusive dressings are able to keep a wound moist by trapping the moisture vapor that is lost by the wound on a continual basis.
- Keep pH 7.4. Alkalinity and acidity affect the healing of a wound. A wound with an alkaline content has the potential to become infected. A wound with acidic content (fecal material, urine, or fistula drainage) will cause the cellular functions to decline or stop. A very low or very high pH is toxic to fibroblasts and white blood cells.
- Prevent and manage infection. Cover the wound to protect it from outside contaminants. Use an appropriate dressing.
- Cleanse the wound. Use normal saline with 4-15 psi (pressure per square inch) of pressure/force to remove debris without harming healthy tissue.
- Remove non-viable tissue. Use the most appropriate type of debridement method.
- Maintain appropriate level of moisture. Use a dressing with a high moisture-vapor transmission rate.
- Eliminate dead space. Place absorbent, impregnated, or cavity dressing into the wound with a cotton-tipped applicator. Make sure the dressing is in contact with the wound edges and can be easily removed. Do not “pack” into the wound.
- Control odor. Change the dressing with appropriate frequency. Use antimicrobials and debridement as indicated.
- Eliminate or minimize pain. Use semi-occlusive or non-adherent dressings. Change the dressing less frequently and practice pain control interventions (e.g., medication).
- Protect periwound skin. Use skin barriers and appropriate interval dressing changes.

FACTORS AFFECTING THE HEALING PROCESS

When a wound will not heal, there may be some internal and external factors that can delay the healing process. Before treatment plans are put into place, it's important to assess why the wound won't heal. The following section will explain components that may impede wound healing. It may not be the dressing that's not assisting the healing wound; it may be the patient's nutritional status, oxygenation levels, etc.

LOCAL

- Infection – single most important cause of delayed healing
- Blood supply
- Necrotic tissue
- Pseudomonas – green
- Blood supply – wounds need blood to heal – white blood cells, red blood cells, oxygen, etc. Vascularization is the key.
- Limitations on arterial blood flow and/or venous drainage will impair blood flow.
- Remove the necrotic tissue. A wound can't close if something foreign is in it.
- Oxygen – Oxygenation is critical to wound healing, because it fuels the cellular functions needed to carry out the repair process. Without adequate oxygen, the healing process is impaired. Patients with pulmonary conditions need to be monitored closely to make sure their oxygen levels are appropriate. Cigarette smoking is very debilitating to the wound healing process. Not only does smoking decrease oxygen to the body, nicotine is a potent vasoconstrictor to the circulatory system. Studies have shown there is a higher incidence of wound infections, dehiscence, and delayed healing with smokers as compared to non-smokers. Smokers should be notified of the negative effects of smoking and offered a program to assist with smoking cessation.

SYSTEMIC

- Nutrition has a huge impact on healing. The body needs certain amounts of nutrients to function properly every day. When a wound is involved, more nutrients are required during the healing process. Immune system function is also influenced by adequate nutrition. Nutritional monitoring of patients with wounds should include adequate levels of protein, calories, zinc, vitamin C, vitamin A, magnesium, iron, and copper.
- WBC, RBC
- Glucose
- Hemoglobin/hematocrit
- Age
- Sodium, potassium, chloride, etc.

Protein is needed in order for the wound to heal - lab values of albumin and pre-albumin. WBC, RBC – fight infection and bring the necessary nutrients to the area.

GLUCOSE – DELAYS HEALING

- Diabetes – increases risk of infection
- Delayed healing due to acidosis and sluggish inflammatory response
- Defective leukocyte production
- Ineffective phagocytosis
- Lack of fibroblastic proliferation
- Lack of production of granulation tissue and laying down of the collagen matrix
- Hemoglobin/hematocrit = decrease in WBCs = increase susceptibility to infection
- Decrease in RBCs delays healing process secondary to decrease in oxygen and nutrients, so any disease that affects the WBCs or RBCs – expect a delay in healing
- Age = delayed wound contracture, decrease in epithelialization, delayed cellular migration and proliferation, decreased rate of capillary growth, delayed collagen remodeling, increased rate of dehiscence
- The response decreases, skin loses water content, collagen, elasticity, epidermal layer decreases
- Medications – corticosteroids, cardiac drugs (beta blockers)
- Decrease in the inflammatory response – increase risk of infection
- Decreased leukocyte production
- Radiation, chemo, immunosuppressive therapy, etc.

PHYSICAL

- Immobility
- Incontinence
- Sensory awareness
- Cognitive impairment
- Contractures
- Medical diagnosis = obesity, contractures, hypotension, hypertension
- Prosthetic/orthotic
- Skin characteristics

Blood flow is the most important factor in wound healing. If blood circulation is insufficient, wound healing cannot occur. If blood flow is abnormal, nutrients, oxygen, and cell mediators cannot get to the wound.

Maintenance of a wound comes down to two things:

- Blood flow
- Nutrition

WOUND TYPES

- **Pressure injury**
- **Venous wounds**
- **Arterial wounds**
- **Neuropathic/diabetic wounds**

PRESSURE INJURY

According to the NPUAP (National Pressure Ulcer Advisory Panel) and the EPUAP (European Pressure Ulcer Advisory Panel), a pressure injury is localized damage to the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure or pressure in combination with shear. A number of contributing or confounding factors are also associated with pressure injuries. The significance of these factors is yet to be elucidated.

Knowledge regarding pressure injury prevention, appropriate wound care implementation, and accurate documentation is essential to maintaining and restoring skin integrity. When health care professionals and staff receive information about wound care, pressure injury prediction, and prevention on a routine basis, they have more knowledge about these conditions, and the incidence of pressure injuries directly declines, costs of care decrease, and healing rates improve (Bryant, R.A. & Nix, D.P, 2007, pg. 3).

It's important to shorten the gaps among health care professionals regarding wound care in order to prevent wounds and keep a strong focus on skin integrity of the individual. Shortening the gaps will save not only money, but the pain and agony of the individual with the pressure injury. Early intervention offers an opportunity for preventing pressure injuries.

VENOUS INSUFFICIENCY WOUNDS

Venous insufficiency ulcers occur because of insufficient blood flow from the tissues back to the heart. Venous wounds account for 70 to 90 percent of all leg ulcers. Venous ulcers develop when there is impaired return of venous blood from the tissues back to the heart. This causes venous congestion and leads to venous hypertension. Venous ulcers are generally located in the gaiter area, and the wound margins usually look very jagged. The wound base on venous wounds tends to be a purplish–red color and drains moderately to heavy.

ARTERIAL WOUNDS

Arterial ulcers, also called ischemic ulcers, are a result of arterial insufficiency. A narrowing or obstruction of the artery interrupts arterial blood flow. The narrowing or obstruction can also be caused by atherosclerosis. Most arterial ulcers are seen anywhere on the lower extremities and often times seen on the foot or toes. The wound margins generally look "punched out" with well-defined borders. Because there is not much blood flow getting to the arterial wound, the wound bed often appears pale in color, and necrotic tissue is common. There is not much exudate seen with these wounds, and they are generally very painful.

LOWER-EXTREMITY NEUROPATHIC DISEASE

Lower-extremity neuropathic disease occurs as a result of damage done to nerve structures and is often associated with diabetes. In the diabetic individual, metabolic changes occur from hyperglycemia and insulin deficiency. This in turn contributes to degenerative functional and structural defects that damage the peripheral nerve tissue and result in neurological deficits. The peripheral neuropathy has three

components that may be affected: autonomic, sensory, and motor. These wounds can be anywhere on the lower extremity but are usually located on the foot. The most common locations for diabetic foot ulcers are on the plantar aspect of the foot, over the metatarsal heads, or under the heel.

GLOSSARY OF TERMS

ABSCESS – A circumscribed collection of pus that forms in tissue as a result of acute or chronic localized infection. It is associated with tissue destruction and frequent swelling.

ABRASION – Circumscribed removal of the superficial layers of skin.

BACTEREMIA – The presence of viable bacteria in the circulating blood.

CELLULITIS – Inflammation of cellular or connective tissue. Inflammation may be diminished or absent in immunosuppressed individuals.

CLEAN DRESSING – Dressing that is not sterile but is free of environmental contaminants such as water damage, dust, pest and rodent contaminants, and gross soiling.

CLEAN WOUND – Wound free of purulent drainage, devitalized tissue or dirt.

CONTAMINATED – Containing bacteria, other microorganisms, or foreign material. The term usually refers to bacteria contamination and, in this context, is synonymous with colonized. Wounds with bacterial counts of 101 organisms per gram of tissue or less are generally considered contaminated; those with higher counts are generally considered infected.

CULTURE – (Bacterial) Removal of bacteria from a wound for the purpose of placing them in a growth medium in the laboratory to propagate to the point where they can be identified and tested for sensitivity to various antibiotics. Swab cultures are generally inadequate for this purpose.

DEAD SPACE – A cavity remaining in a wound.

DEBRIDEMENT – Removal of devitalized tissue and foreign matter from a wound. Various methods may be used for this purpose:

AUTOLYTIC DEBRIDEMENT – The use of synthetic dressings to cover a wound and allow eschar to self-digest by the action of enzymes present in wound fluids.

BIOLOGIC – The topical application of sterile maggots to break down devitalized tissue.

ENZYMATIC – (Chemical Debridement) The topical application of proteolytic substances (enzymes) to break down devitalized tissue.

MECHANICAL DEBRIDEMENT Removal of foreign material and devitalized or contaminated tissue from a wound by physical forces rather than by chemical (enzymatic) or natural (autolytic) forces. Examples are wet-to-dry dressings, wound irrigation, whirlpool, and clextranomers.

SHARP DEBRIDEMENT Removal of foreign material or devitalized tissue by a sharp instrument such as a scalpel. Laser debridement is also considered a type of sharp debridement.

DEHISCENCE Separation of the layers of a surgical wound.

DENUDE Loss of epidermis.

DRESSING The material applied to a wound for the protection of the wound and absorption of drainage.

EDEMA Presence of abnormally large amounts of fluid in the interstitial space.

EPIBOLE Edges or top layers of epidermis have rolled down to cover lower edges of epidermis, including basement membrane so that the epithelial cells cannot migrate from wound edges; also described as closed-wound edges.

EPITHELIALIZATION The stage of tissue healing in which the epithelial cells migrate (move) across the surface of a wound.

ERYTHEMA Redness of the skin.

BLANCHABLE ERYTHEMA Reddened area that temporarily turns white or pale when pressure is applied with a fingertip. Blanchable erythema over a pressure site is usually due to a normal reactive hyperemic response.

NON-BLANCHABLE ERYTHEMA Redness that persists when fingertip pressure is applied.

ESCHAR Thick, leathery, necrotic, devitalized tissue.

EXCORIATION Linear scratches on the skin.

EXUDATE Any fluid that has been extruded from a tissue or its capillaries, more specifically because of injury or inflammation. It is characteristically high in protein and white blood cells.

FASCIA A sheet or band of fibrous tissue that lies deep below the skin or encloses muscles and various organs of the body.

FRICTION Mechanical force exerted when skin is dragged across a coarse surface such as bed linens.

FULL-THICKNESS TISSUE LOSS Loss of tissue below the dermis level, involving subcutaneous and possibly other tissue layers, to include loss of fascia, tendons, muscles, bone, or other underlying structures. Full-thickness wounds heal by formation of granulation tissue, contraction, and elpithelialization.

GRANULATION TISSUE The pink/red, moist tissue that contains new blood vessels, collagen, fibroblasts, and inflammatory cells that fills an open, previously deep wound when it starts to heal.

Healing A dynamic process in which anatomical and functional integrity is restored. This process may be monitored and measured. For wounds of the skin, it involves repair of the dermis (granulation tissue formation) and epidermis (epithelialization). Healed wounds represent a spectrum of repair; they can be ideally healed (tissue regeneration), minimally healed (temporary return of anatomical continuity), or acceptably healed (sustained functional and anatomical result). The acceptably healed wound is the ultimate outcome of wound healing but not necessarily the appropriate outcome for all patients.

PRIMARY INTENTION HEALING Closure and healing of a sutured wound.

SECONDARY INTENTION HEALING Closure and healing of a wound by the formation of granulation tissue and epithelialization.

TERTIARY HEALING Wound left open above the fascia layer, which is surgically closed at a later time.

INDURATION Abnormal firmness of tissue with a definite margin.

IRRIGATION Cleansing by a stream of fluid, preferably saline.

ISCHEMIA Deficiency of blood supply to a tissue, often leading to tissue necrosis.

MACERATE To soften by wetting or soaking. In a healing context, it refers to degenerative changes and disintegration of skin when it has been kept too moist.

MOISTURE In the context of this document, moisture refers to skin moisture that may increase the risk of pressure ulcer development and impair healing of existing ulcers. Primary sources of skin moisture include perspiration, urine, feces, drainage from wounds, or fistulas.

NECROTIC TISSUE Tissue that has died and has, therefore, lost its usual physical properties and biological activity. Also called "devitalized tissue."

OSTEOMYELITIS Inflammation of the bone marrow and adjacent bone, often due to infection.

PRESSURE (interface) Force per unit area that acts perpendicularly between the body and the support surface. This parameter is affected by the stiffness of the support surface, the composition of the body tissue, and the geometry of the body being supported.

PRESSURE REDUCTION Reduction of interface pressure, not necessarily below the level required to close capillaries (e.g., capillary-closing pressure).

PRESSURE RELIEF Reduction of interface pressure below capillary-closing pressure.

PRESSURE INJURY – Any injury caused by an intense and/or prolonged pressure or pressure combined with shear. Usually located over a bony prominence, the injury can present as intact skin or an open ulcer and may be painful. The tolerance of soft tissue for pressure and shear may also be affected by microclimate, nutrition, perfusion, co-morbidities, and condition of the soft tissue. Pressure injuries are graded or staged to classify the degree of tissue damage observed. The National Pressure Ulcer Advisory Panel redefined the definition of a pressure injuries during the NPUAP 2016 Staging Consensus Conference. The updated staging system includes the following definitions.

STAGE 1

Pressure Injury: Non-blanchable erythema of intact skin

Intact skin with a localized area of non-blanchable erythema, which may appear differently in darkly pigmented skin. Presence of blanchable erythema or changes in sensation, temperature, or firmness may precede visual changes. Color changes do not include purple or maroon discoloration; these may indicate deep tissue pressure injury.

STAGE 2

Pressure Injury: Partial-thickness skin loss with exposed dermis

The wound bed is viable, pink or red, moist, and may also present as an intact or ruptured serum-filled blister. Adipose (fat) is not visible, and deeper tissues are not visible. Granulation tissue, slough, and eschar are not present. These injuries commonly result from adverse microclimate and shear in the skin over the pelvis and shear in the heel. This stage should not be used to describe moisture associated skin damage (MASD) including incontinence associated dermatitis (IAD), intertriginous dermatitis (ITD), medical adhesive-related skin injury (MARSI), or traumatic wounds (skin tears, burns, abrasions).

STAGE 3

Pressure Injury: Full-thickness skin loss

Full-thickness loss of skin, in which adipose (fat) is visible in the ulcer and granulation tissue and epibole (rolled wound edges) are often present. Slough and/or eschar may be visible. The depth of tissue damage varies by anatomical location; areas of significant adiposity can develop deep wounds. Undermining and tunneling may occur. Fascia, muscle, tendon, ligament, cartilage, and/or bone are not exposed. If slough or eschar obscures the extent of tissue loss, this is an unstageable pressure injury.

STAGE 4

Pressure Injury: Full-thickness skin and tissue loss

Full-thickness skin and tissue loss with exposed or directly palpable fascia, muscle, tendon, ligament, cartilage, or bone in the ulcer. Slough and/or eschar may be visible. Epibole (rolled edges), undermining and/or tunneling often occur. Depth varies by anatomical location. If slough or eschar obscures the extent of tissue loss, this is an unstageable pressure injury.

Unstageable pressure injury

Obscured full-thickness skin and tissue loss - Full-thickness skin and tissue loss in which the extent of tissue damage within the ulcer cannot be confirmed because it is obscured by slough or eschar. If slough or eschar is removed, a Stage 3 or Stage 4 pressure injury will be revealed. Stable eschar (e.g., dry, adherent, intact without erythema or fluctuance) on the heel or ischemic limb should not be softened or removed.

Deep Tissue Pressure Injury:

Persistent non-blanchable deep red, maroon or purple discoloration - Intact or non-intact skin with localized area of persistent non-blanchable deep red, maroon, purple discoloration or epidermal separation revealing a dark wound bed or blood filled blister. Pain and temperature change often precede skin color changes. Discoloration may appear differently in darkly pigmented skin. This injury results from intense and/or prolonged pressure and shear forces at the bone-muscle interface. The wound may evolve rapidly to reveal the actual extent of tissue injury or may resolve without tissue loss. If necrotic tissue, subcutaneous tissue, granulation tissue, fascia, muscle or other underlying structures are visible, this indicates a full thickness pressure injury (Unstageable, Stage 3 or Stage 4). Do not use DTPI to describe vascular, traumatic, neuropathic, or dermatologic conditions.

Additional pressure injury definitions:

Medical Device Related Pressure Injury (this describes an etiology) - Medical device-related pressure injuries result from the use of devices designed and applied for diagnostic or therapeutic purposes. The resultant pressure injury generally conforms to the pattern or shape of the device. The injury should be staged using the staging system.

Mucosal Membrane Pressure Injury - Mucosal membrane pressure injury is found on mucous membranes with a history of a medical device in use at the location of the injury. Due to the anatomy of the tissue these ulcers cannot be staged.

Staging definitions recognize the following limitations: Assessment of Stage I pressure ulcers may be difficult in patients with darkly pigmented skin. When eschar is present, accurate staging of the pressure ulcer is not possible until the eschar has sloughed or the wound has been debrided.

PREVALENCE The number of cases present in a population at one point in time.

PSI (pounds per square inch) A unit of pressure, in this case, the pressure exerted by a stream of fluid against one square inch of skin or wound surface.

PURULENT DISCHARGE/DRAINAGE A product of inflammation that contains pus cells (e.g., leukocytes, bacteria) and liquefied necrotic debris.

QUALITATIVE DATA Information that describes the nature or qualities of a subject.

QUANTITATIVE DATA Information obtained of a subject that is measurable.

REACTIVE HYPEREMIA Reddening of the skin caused by blood rushing back into ischemic tissue.

SEPSIS The presence of various pus-forming and other pathogenic organisms or their toxins in the blood or tissues. Clinical signs of blood-borne sepsis include fever, tachycardia, hypotension, leukocytosis, and a deterioration in mental status. The same organism is often isolated in both the blood and the pressure ulcer.

PRODUCT INFORMATION

NEGATIVE PRESSURE WOUND THERAPY

MEDICARE CODE

- E2402 – NPWT stationary or portable electrical pump
- A6550 – Wound care set that includes dressing and tubing
  Quantities: Up to 15 dressing kits per month per wound
- A7000 – Disposable canister
  Quantities: Up to 10 canisters per month

MEDICARE QUALIFICATIONS

- MD order – PRIOR to delivery
- Medical record documentation:
  - » History of wound
  - » Previous/current wound treatment programs
- Length of sessions
- Dressing types and change frequency
- Debridement
- Changes in wound condition, exudate quantities
- Presence of granulation and necrotic tissues
- Other concurrent treatment measures
- Must include ICD-10 codes on claim
- Medical record documentation (cont):
  - » Documentation of regular evaluation
  - » Monthly measurements/condition (minimum)
  - » Documentation that other dressings have been tried and proven ineffective and that NPWT is last resort

***Refer to CMS guidelines for specific coverage criteria for various wound types*

THERAPEUTIC SUPPORT SURFACES

GROUP 1 SUPPORT SURFACES

MEDICARE CODE

- EO184 – Non-powered dry mattress (foam)
- E0185 – Gel or gel-like pressure pad for mattress
- E0196 - Gel pressure mattress

MEDICARE QUALIFICATIONS

To qualify, the patient must have one of the following:

- Patient is completely immobile
- Limited mobility
- Any stage pressure ulcer and one of the following: impaired nutritional status, fecal or urinary incontinence, altered sensory perception, circulatory status

GROUP 2 SUPPORT SURFACES

MEDICARE CODE

- E0371 – Advanced pressure-reducing mattress overlay
- E0372 – Powered air overlay for mattress
- E0373 – Non-powered advanced pressure-reducing mattress
- E0277 – Powered pressure-reducing air mattress
- E0193 – Powered air flotation bed

MEDICARE QUALIFICATIONS

- Multiple Stage II pressure ulcers located on trunk or pelvis
- Large or multiple Stage III pressure ulcer(s) on the trunk or pelvis
- Recent myocutaneous flap or skin graft for a pressure ulcer on the trunk or pelvis

SURGICAL DRESSINGS

IMPORTANT INFORMATION BEFORE THE PROCESS BEGINS:

1. Make sure the wound has been debrided if needed.
2. Get a copy of the debridement information from the physician and keep it in your records.
3. Make sure the physician's order is SPECIFIC and includes the dressing type (hydrocolloid, foam, etc.) and number of dressing changes per day, per week, and the duration of use.
4. Documentation NEEDS to be obtained on the progress of the wound.
5. Use the correct modifiers.

(The section on surgical dressings in the Supplier's Manual and the Local Coverage Determination (LCD) for surgical dressings are very helpful. Follow the guidelines for product utilization in these documents.)

SURGICAL DRESSING COVERAGE CRITERIA

Surgical dressings include both primary and secondary dressings

- Primary - a therapeutic or protective covering applied directly to wounds or lesions either on the skin or caused by an opening in the skin
- Secondary - materials that serve a therapeutic or protective function and are needed to secure a primary dressing

Surgical dressings are covered when either of the following criteria is met:

- Required for the treatment of a wound caused by, or treated by, a surgical procedure
- Required after debridement of a wound

Surgical dressings are covered as long as medically necessary.

COVERAGE AND USAGE RULES

GENERAL RULES

The quantity and/or type of dressing dispensed at any one time must take into account the current status of the wound(s), the likelihood of change, and the recent use of dressing.

- Dressing needs may change frequently.
- Dressing amounts must be tailored to the specific needs of the individual patient.
- Suppliers must communicate regularly with the health care provider to determine the quantity that the patient is using and supply only that amount. Reordering of the dressings should be based upon actual patient usage, and suppliers must not dispense a quantity that exceeds the expected utilization.
- No more than one month's supply may be provided at one time unless the reason is well documented.

Use of more than one type of wound filler or cover on a single wound is rarely medically necessary. If more than one is used, the reason must be well documented. An exception might be when an alginate or other fiber gelling wound cover or a saline, water, or hydrogel impregnated gauze dressing needs an additional wound cover.

It may not be appropriate to use some combinations of dressings together (e.g., a hydrogel and an alginate).

When certain dressings are used as secondary dressings, they are meant to be changed at frequencies less than daily (e.g., composite dressings, foam and hydrocolloid wound covers, and transparent film). Their use with primary dressings that require more frequent dressing changes should be avoided.

RULES FOR SPECIFIC DRESSINGS

Alginate or Other Fiber Gelling Dressing (A6196-A6199)

- Alginate wound covers and fillers are covered for moderate-highly exudative full thickness wounds and wound cavities, respectively. The wound cannot be dry or covered with eschar.
- Frequency of dressing change - up to once per day.
- Coverage is for one wound cover sheet for the approximate size of the wound or up to two units of wound filler per dressing change.
- One unit of wound filler = 6 inches of alginate or other fiber gelling dressing rope.

Composite Dressing (A6203-A6205)

- Frequency of dressing change - up to three times per week.
- Coverage is for one wound per dressing change.

Composite Dressings without Adhesive Borders (A6200, A6201 and A6202)

- Invalid from claim submission.

Contact Layer (A6206-A6208)

- Only used as a primary dressing to line the entire wound.
- Frequency of dressing change - up to once per week.
- Not meant to be changed with each dressing change.

Foam Dressing (A6209-A6215)

- Covered when used on full thickness wounds with moderate to heavy exudate.
- Frequency of dressing change when used as a primary dressing - up to 3 times per week.
- Frequency of dressing change when used as a secondary dressing and the wound has very heavy exudate - up to three times per week.
- Frequency of dressing change for wound fillers - up to once per day.

Gauze, Non-Impregnated (A6216-A6221, A6402-A6404, A6407)

- A6402 – A6404 and A6407 are for use with Stage II, III, or IV wounds with light to moderate drainage unless covered by a secondary dressing, in which case they can be used with a more heavily draining wound.
- Frequency of dressing change for a dressing without a border - up to three times per day.
- Frequency of dressing change for a dressing with a border - once per day.
- Usually not necessary to stack more than two gauze pads on top of each other in any one area.

Gauze, Impregnated with Other than Water, Normal Saline, Hydrogel, or Zinc Paste (A6222-A6224, A6266)

- Always use A6222-A6224 as a primary dressing. It is usually not necessary to stack more than two gauze pads on top of each other in any one area.
- A6266 is only for use as a secondary dressing and should not be used with a primary dressing with an adhesive border.
- Frequency of dressing change - once per day.

Gauze, Impregnated with Water or Normal Saline (A6228-A6230)

- No medical necessity for these dressings compared with non-impregnated dressings.
- Payment will be based on the least costly medically appropriate alternative, sterile non-impregnated gauze.

Gauze, Impregnated with Hydrogel for Direct Wound Contact (A6231-A6233)

- Covered for use with full thickness wounds with minimal or no exudate (e.g., stage III or IV ulcers).
- Documentation must substantiate the medical necessity for use with stage II ulcers (e.g., location in sacrococcygeal area).
- Frequency of dressing change - once per day for dressings without an adhesive border and three times per week for dressings with an adhesive border.

Hydrocolloid Dressing and Wound Filler (A6234-A6241)

- Covered for use on wounds with light to moderate exudates.
- No more than one hydrocolloid dressing per wound.
- Frequency of dressing change - up to three times per week.

Hydrogel Dressing (A6231-A6233, A6242-A6248)

- Covered for use on full thickness wounds with minimal or no exudates (e.g., Stage III or IV pressure injuries).
- Documentation must substantiate medical necessity if used for Stage II ulcers.
- Cannot use with alginate dressings or hydrogel wound filler.
- Frequency of dressing change for wound covers with adhesive border - up to three times per week.
- Frequency of dressing change for wound covers without adhesive border or wound fillers - up to once per day.
- Frequency of dressing change for wound fillers – once per day.
- Wound filler - quantity must not exceed the amount needed to line the surface of the wound (it does not need to fill the cavity). Documentation must substantiate the medical necessity for more than three units per wound in 30 days.
- Use of more than one type of hydrogel dressing on the same wound is not medically necessary.

Specialty Absorptive Dressing (A6251-A6256)

- Covered for use on moderate to high exudative wounds, e.g. Stage III or Stage IV ulcers.

- Frequency of dressing change for dressings without an adhesive border - up to once per day.
- Frequency of dressing change for dressings with an adhesive border - up to every other day.

Transparent Film (A6257-A6259)

- Covered for use on open partial thickness wounds with minimal exudate or closed wounds.
- Frequency of dressing change - up to three times per week.

Wound Pouch (A6154)

- For moderate to heavy drainage.
- Frequency of dressing change - up to three times per week.

Wound Filler, Not Elsewhere Classified (A6261-A6262)

- For use as a primary dressing with Stage III or IV wounds with moderate to heavy exudates.
- Not appropriate with hydrogels.
- Frequency of dressing change - up to once per day.

Tape (A4450, A4452)

- Covered when needed to hold on a wound cover.
- Documentation is needed when used with a wound cover with an adhesive border.
- Tape change is determined by the frequency of change of the wound cover being secured.
- Amounts of tape that should be used:
  - » Up to two units per dressing change for wound covers measuring less than 16 square inches.
  - » Up to three units per dressing change for wound covers measuring 16-48 square inches.
  - » Up to four units per dressing change for wound covers more than 48 square inches.

Light Compression Bandage (A6448-A6450), **Moderate/High Compression Bandage** (A6451, A6452), **Self-Adherent Bandage** (A6453-6455), **Conforming Bandage** (A6442-A6447), **Padding Bandage** (A6441)

- Frequency of change - no more than once per week, unless they are part of a multi-layer compression bandage system. They are considered to be reusable.
- Frequency of change of a conforming bandage dressing is based on the frequency of change of the selected underlying dressing. They are considered to be reusable.

DOCUMENTATION/ORDER REQUIREMENTS

Initial Order

- An order for each item must be signed and dated by the treating physician and kept on file by the supplier.
- Items billed before obtaining a signed and dated order must be billed with the EY modifier.
- The order must specify:
  - » Type of dressing
  - » Size of the dressing (if appropriate)
  - » Number/amount to be used (if more than one)
  - » Frequency of dressing change
  - » Duration of need

New Orders

- A new order is needed if a new dressing is added or if the quantity of an existing dressing is increased.
- A new order is not needed for a decrease in the quantity of dressings.
- A new order is required at least every three months.

Documentation

- The following information must be obtained from the physician, nursing home, or home care nurse:
  - » The number of surgical/debrided wounds being treated with a dressing
  - » Reason for the dressing use (e.g., surgical wound, debrided wound, etc.)
  - » Whether the dressing is being used as a primary dressing, a secondary dressing or for some non-covered use
- The source of the information and date obtained must be documented in the supplier's records
- Clinical information which supports the medical necessity for the type and quantity of dressings must be in the patient's medical record
- Supplier-created forms cannot be submitted as a substitute for the medical record

Wound Evaluation

- Must be performed on at least a monthly basis unless there is documentation justifying why the evaluation could not be performed within this time frame
  - » More frequent evaluation is expected for nursing home patients or patients with heavily draining or infected wounds (e.g. weekly)
  - » May be performed by a nurse, physician or other health care professional

- Evaluation must include:
  - » Type of each wound (e.g., surgical wound, pressure injury, burn, etc.)
  - » Location of wound
  - » Wound size (length, width, and depth)
- Depth measurement must be appropriate for the type of dressing – e.g., for some dressings, the depth measurement must indicate full thickness involvement
  - » Amount of drainage – this must support the need for the dressing
  - » Other relevant information

Situations in Which Dressings are Non-Covered Under the Surgical Dressings Benefit:

- Drainage from a cutaneous fistula which has not been caused by or treated by a surgical procedure
- A Stage I pressure injury
- A first degree burn
- Wounds caused by trauma which do not require surgical closure or debridement, such as a skin tear or abrasion
- A venipuncture or arterial puncture site (e.g., blood sample) other than the site of an indwelling catheter or needle

Dressings That are Non-Covered Under the Surgical Dressings Benefit:

- Small adhesive bandages and first-aid type adhesive bandages (A6413)
- Silicone gel sheet (A6025) used for treatment of keloids or other scars
- Skin sealants or barriers (A6250)
- Wound cleansers (A6260) or irrigating solutions
- Solutions used to moisten gauze (e.g., saline)
- Topical antiseptics or topical antibiotics
- Enzymatic debriding agents
- Gauze or other dressings used to cleanse or debride a wound but not left on the wound
- Gauze impregnated with water or normal saline (A6228 – A6230)
- Non-elastic binder for an extremity (A4465)
- Composite dressings without an adhesive border (A6200, A6201 and A6202)
- Any item listed in the FDA Orange Book (these are considered to be a drug – see www.fda.gov/cder/ob/)
- Surgical dressings applied by a physician as part of a professional service that is billed to Medicare. These dressings are considered incident to the professional services and claims should be submitted to the local carrier or intermediary.

- Dressings that may be covered under other benefits. These must be billed according to the requirements of the applicable policy. They cannot be separately billed using the surgical dressing codes. Examples include dressings used with:
    - » Continent ostomies
    - » Infusion pumps
    - » Parenteral nutrition
    - » Gastrostomy tubes for enteral nutrition
    - » Tracheostomies
    - » Dialysis access catheters
    - » Prevention of the reoccurrence of stasis ulcers that have healed
    - » Treatment of lymphedema in the absence of ulcers

SURGICAL DRESSING CODES

Composite dressings (A6203-A6205)

Composite dressings without adhesive border (A6200, A6201 and A6202)

Contact layers (A6206-A6208)

Foam dressings (A6209-A6215)

Impregnated gauze dressings (A6222-A6233, A6266 and A6456)

Specialty absorptive dressings (A6251-A6256)

Wound pouch (A6154)

Gel sheets (A6025)

Hydrogel sheets (A6242-A6247)

Collagen wound filler (A6010, A6011 and A6024)

Alginate or other fiber gelling wound filler (A6199)

Foam wound filler (A6215)

Hydrocolloid wound filler (A6240, A6241)

Hydrogel wound filler (A6248)

Non-impregnated packing strips (A6407)

Wound fillers not falling into any of these categories are coded as A6261 or A6262

DEFINITIONS:

Composite dressings (A6200-A6205) are products combining physically distinct components into a single dressing that provides multiple functions. These functions must include, but are not limited to:

- A physical (not chemical) bacterial barrier that is present over the entire dressing pad and extends out into the adhesive border
- An absorptive layer other than an alginate or other fiber gelling dressing, foam, hydrocolloid, or hydrogel
- Either a semi-adherent or non-adherent property over the wound site

Contact layers (A6206-A6208) are thin, non-adherent, non-absorptive sheets placed directly on an open wound bed to line the entire wound and protect the wound tissue from direct contact with other agents or dressings applied to the wound. They are porous to allow wound fluid to pass through for absorption by a separate overlying dressing. They remain on the wound for an extended time while the absorptive dressings are changed.

Foam dressings (A6209-A6215) are a sterile, non-linting, non-adherent absorptive dressings made of open cell, medical grade expanded polymer.

Impregnated gauze dressings (A6222-A6233, A6266, A6456) are woven or non-woven materials into which substances such as iodinated agents, petrolatum, zinc paste, crystalline sodium chloride, chlorhexadine gluconate (CHG), bismuth tribromophenate (BTP), water, aqueous saline, hydrogel, or other agents have been incorporated into the dressing material by the manufacturer. These codes are not used for gauze dressings containing silver.

Specialty absorptive dressings (A6251-A6256) are unitized multi-layer dressings which provide either a semi-adherent quality or non-adherent layer and highly absorptive layers of fibers such as absorbent cellulose, cotton, or rayon.

Wound covers are flat dressing pads with or without an adhesive border.

- A wound cover with an adhesive border has an integrated cover and a distinct adhesive border designed to adhere tightly to the skin. The adhesive border must be present along all sides of the dressing and must be at least ½" wide.
- Wound covers with adhesive borders are usually indicated for use with wounds requiring less frequent dressing changes. Additional dressings are not usually needed on top of these wound covers. If an additional dressing is used, the reason for use must be well documented.
- The size of the wound cover must be based on and be appropriate to the size of the wound. The pad size is usually about 2" greater than the dimensions of the wound (e.g., a 2" x 2" wound requires a 4" x 4" pad size)
- Wound covers that slightly exceed 16 square inches (e.g., 4¼" x 4¼") are not functionally different from 4" x 4" dressings

Wound fillers are dressing materials placed into open wounds to eliminate dead space, absorb exudate or maintain a moist wound surface. They come in hydrated forms (e.g., pastes, gels), dry forms (e.g., powder, granules, beads), or other forms such as rope, spiral or pillows. The units of service will depend on the product and could be 1 gram, 1 fluid ounce, 6" length, or 1 yard.

Wound pouch (A6154) is a waterproof collection device with a drainable port that adheres to the skin around a wound.

Elastic bandages are bandages that contain fibers of rubber (latex, neoprene), spandex, or elastane.

First-aid type adhesive bandages (A6413) are bandages with a pad size less than 4 square inches (e.g., Band-Aid or similar products).

Non-elastic bandages (A6442-A6447) are roll gauze-type bandages made from cotton or synthetic materials (nylon, viscose, polyester, rayon, polyamide) that are stretchable, but do not contain elastic fibers. They include short-stretch bandages.

Moderate/high compression bandage (A6451, A6452) are elastic bandages that produce moderate or high compression that is sustained typically for one week.

MARKETING PLAN

Marketing a professional service such as wound care is very important in gaining new business and keeping your existing business. A thorough marketing plan is key to the success of your business. This marketing plan is designed to aid in diversification and to increase revenue stream by implementing a wound care program or solution.

It should include your market research, location, the customer group you have targeted, competition, positioning, the product or service you are selling, pricing, advertising, and promotion.

Effective marketing, planning, and promotion begins with current information about the marketplace.

Once you have all the necessary information, write down your plan:

1. Define your business

- Your product or service
- Your geographic marketing area - neighborhood, regional or national
- Your competition
- How you differ from the competition and what makes you special
- Your price
- The competition's promotion methods
- Your promotion methods
- our distribution methods or business location

2. Define your customers

- Your current customer base - age, sex, income, and neighborhood
- How your customers learn about your product or service - advertising, e-mail, social media, direct mail, and word of mouth
- Patterns or habits your customers and potential customers share - where they shop, what they read, watch, and listen to
- Qualities your customers value most about your product or service - selection, convenience, service, reliability, availability, and affordability
- Qualities your customers like least about your product or service. Can they be adjusted to serve your customers better?
- Prospective customers you aren't currently reaching

3. Define your plan and budget

- Previous marketing methods you have used to communicate to your customers
- Methods that have been most effective

- Cost compared to sales
- Cost per customer
- Possible future marketing methods to attract new customers
- Percentage of profits you can allocate to your marketing campaign
- Marketing tools you can implement within your budget - newspaper, magazine, Yellow Pages, radio or television advertising, direct mail, social media, telemarketing, and public relations activities such as community involvement, sponsorship, or press releases
- Methods of testing your marketing ideas
- Methods for measuring results of your marketing campaign
- The marketing tool you can implement immediately

The final component in your marketing plan should be your overall promotional objectives: to communicate your message, create an awareness of your product or service, motivate customers to buy and increase sales, or other specific targets. Objectives make it easier to design an effective campaign and help you keep that campaign on the right track. Once you have defined your objectives, it is easier to choose the method that will be most effective.

KEYS TO SUCCESS

THERE ARE SIX KEYS TO THE SUCCESS OF YOUR BUSINESS IN WOUND CARE AND BARIATRICS:

1. Identify your strengths.
2. Identify current referral sources.
3. Cross market your services.
4. Hire or contract a wound care clinician.
5. Reimbursement
6. Education and promotion

IDENTIFY YOUR STRENGTHS

- Experts in the field of wound care
- One-stop shop for wound care
- Local supplier
- Facilitate product placement
- Cost-effective for end consumer
- Education
- Research hard-to-find items

As a wound care provider, the community looks to you as the expert in the field. It's important for your HME to keep current with the latest trends and the most current wound care modalities. The community is looking to you as the "one-stop shop" in the world of wound care. Being knowledgeable about the products and services your referral sources need is critical to the success of your program.

IDENTIFY YOUR CURRENT REFERRAL SOURCES

- Hospitals
- Discharge planners
- Directors of nursing
- Wound care clinics
- Nursing homes
- Long-term care facilities
- Rehab centers
- Physician offices

OTHER POSSIBLE REFERRALS

- Wound care specialist
- Internal med
- Family practice
- Wound care departments in hospitals
- Vascular surgeons
- Podiatry
- Long term acute care hospitals
- Hospice agencies
- Wound, ostomy and continence nurses

It is necessary to approach the appropriate entities within the wound care community to ensure that time is not wasted on inappropriate referrals. These facilities currently provide wound care services to patients and are generally familiar with the various product selections on the market.

Within each of these organizations it is essential to specifically target the decision-makers. They may typically be, but are not limited to: surgeons, general practitioners, wound care nurses, directors of nursing, podiatrists, physical therapists, hospital staff (including discharge planners and case managers), nurses and nursing home staff. These are the people who will be making the decision as to what type of equipment is needed for the patient within the different organizations. It is at the discretion of these individuals if the patient will be prescribed both equipment to speed up the healing process and/or additional preventive products.

CROSS-MARKET YOUR SERVICES

Your success in the HME market will lend you instant credibility with referral sources. It is imperative for you to take advantage of your current relationships within the industry and work closely with them to market your wound care program. Cross-training your current sales staff and providing them with the knowledge and marketing tools is key to the success of your program. VGM Marketing can assist in the development of marketing and promotional materials for your wound care program. The better educated your staff and referral sources are, the more successful your program will be.

REIMBURSEMENT

Reimbursement is key to the success of any program. It is imperative to know your payer sources, the reimbursement criteria, the required documentation, and the reimbursement rates. This information must then be made available to all staff involved with the program. You need to know what your reimbursement will be and what documentation is needed prior to dispensing the equipment and supplies. A section in this manual is dedicated to the documentation and reimbursement process.

TWO COMPONENTS OF THE EDUCATIONAL PIECE

There are two components to the educational part of the wound care program. The first is to educate employees about the new products and to provide continuing education on sales and marketing. This can be accomplished by appointing a key person to focus on the program. It would be ideal for the appointed person to be a wound care clinician. There are several different avenues to train staff including:

- VGM's Director of Wound Care
- VGM online learning platform - VGMU
- Experts from the various manufacturer companies
- Speakers from the HME industry
- Regularly scheduled in-services by your wound care clinician
- VGM's reimbursement experts

The second type of education is to train your referral sources. Using your sales and marketing staff in conjunction with VGM Group, Inc.'s vendor partners, you can accomplish this portion of the education. Training for these individuals can be done during a lunch in-service or a special session to be scheduled at the company or off site with staff.

VGM Education and VGMU offer multiple educational opportunities throughout the year for VGM members to continue education on wound care. This continuing education allows employees to be introduced to new product offerings and stay updated on current wound care information.

Promotions

- Marketing booklets
- Brochures
- E-marketing
- Social media

Marketing booklets and brochures will help you stay in front of your current customers and gain new interest from new customers. VGM's in-house design agency can help you create exactly what you need to target your referral sources.

SALES FORCE MARKETING TIPS

Where can I find my referral sources?

Hospitals, nursing homes/long-term care facilities, primary care physician offices, wound care clinics, rehab centers, vascular surgeons

Who should I market my services to?

OT/PT departments, rehab departments/sub-acute, case managers/discharge planners/social workers, home health care agencies, primary care physicians, CFO, purchaser, financial decision-makers

How should I approach these facilities?

Before entering into these facilities, answer these key questions:

- Do you have a good relationship with the referral source? If so, who makes the financial decisions? Is it the purchaser, CFO, doctor, etc.?

First Visit to Referral Source:

- Ask the following key questions: Do you rent or buy your support surfaces, NPWT, bariatric products? How much are you spending for these services? How much business did you do last year with these products? This is not the time to discuss your product offerings, but to gather information.

Back at the office between visits:

- Develop a cost savings/analysis plan comparing the referral sources current expenditures to what you are able to provide. In addition to the cost saving, be sure to outline the advantages of using your company. Emphasize the following: education, 24/7 service, expert in the HME field, local, one-stop shop for other HME products, and any additional highlights specific to your company

Second visit to the referral source (Preferably within two weeks of the previous visit):

- Present the financial information to the CFO, purchaser, and other health care associates prior to discussing the entire program. The finances will get the attention of the referral source and will provide a more active audience for the remainder of your presentation.

CLOSE the deal with the referral source.

WOUND CARE SWOT ANALYSIS

STRENGTHS

What advantages do we have? What do we do well? What relevant resources do we have access to? What do other people see as our strengths?

- Vendor contracts
- Existing contacts, referral sources
- Hospital based
- Unlikely product category for competitive bidding selection

WEAKNESSES

What could we improve? What do we do badly? What should we avoid?

- Tough competition
- Minimal experience/lack of knowledge
- Currently few relationships specific to wound care community/barriers to entry
- No clinician on staff

OPPORTUNITIES

What are the good opportunities? What are the interesting trends?

- Increase referrals for all products
- Grow financially
- Enter new market
- Compensate for loss revenue with budget cuts

THREATS

What obstacles do we face? What is our competition doing? Are the required specifications for job, products, or services changing? Is changing technology threatening our position? Do we have bad debt or cash-flow problems? Could any of our weaknesses seriously threaten our business?

- Time need to train
- Upfront costs
- Wound care companies' exclusivity in certain territories in the wound care community
- Minimal previous exposure to wound care

MARKETING RESOURCES AVAILABLE

VGM MARKET DATA

If you're looking for ways to maximize your referral sources and find new areas for growth, VGM Market Data can help. It's an industry leader in providing referral source targeting solutions to providers all across the United States. The program provides members exclusive access to the largest and most comprehensive claims database in the country, including more than 8 million health care practitioners and 1.2 billion claims from all major payer sources annually.

The claims data program provides volumized targeting solutions for physicians treating relevant patients, performing surgeries or procedures, diagnosing patients with targeted disease states, and those that can be connected to a claim for DMEPOS. Digging deeper, VGM Market Data also provides competitive market share information, detailing which local provider receives business from key physicians and also ranks provider locations by volume against all other similar provider types billing for that product or service.

VGM Market Data assists clients with identifying, targeting, engaging, and converting key physicians prescribing the products, services, and therapies provided across all post-acute market segments. To learn more about how the program will allow a laser-like focus on key referral sources and growth opportunities in your market, visit www.vgmmarketdata.com or call 844-236-4022.

OFF THE SHELF MARKETING

When you're approaching referral sources or presenting yourself to consumers, you'll want to have compelling literature. VGM's Off the Shelf (OTS) Marketing Program offers members professionally designed and written educational print marketing with quick turn times and significant savings on design and printing. The guides and brochures it offers help members present themselves to consumers, referral sources, and their community as compassionate businesses that truly care about their customers.

The Medicare Quick Reference Guide is an ideal tool to help you educate and build awareness among your referral sources about face-to-face regulations. The booklet is tabbed for easy access to targeted equipment, the content is comprehensive, and it can be purchased off the shelf (you apply your company label), or have us customize it for you. Visit www.vgmmarketing.com/our-work/off-the-shelf-marketing or call 800.799.7402.

MARKETING WOUND CARE

When marketing your wound care services and products, you want to stay service focused. The wound care market is full of many different types of products and services that will give you the advantage. It's also very important to have a point person on staff that is educated in the wound care market. The most successful HME companies have a clinical wound care person on staff that is in charge of their wound care program. Follow up is another important factor when providing wound care products and services. Wounds change on a daily basis, and to ensure you are providing your customers with the correct products and support, follow up is essential.

WOCNCB® Comparison of Wound Certification Programs*

Updated: 5/12/09

	WOCNCB®	NAWC®	AAWM	
	Wound, Ostomy and Continence Nursing Certification Board	National Alliance of Wound Care	American Academy of Wound Management	
Credential(s) Offered	**CWCN® – Certified Wound Care Nurse** **CWOCN®, COCN®, CCCN®, CWON™**, plus Advanced Practice credentialing in wound, ostomy, or continence nursing. Foot care certification offered for RNs at all levels (CFCN®). Credentials are offered to Registered Nurses with a minimum of a Bachelor's Degree. **Established: 1978** **Term of Certification: 5 years**	**WCC® – Wound Care Certified** Credentials are offered to Registered Nurses, Licensed Practical/ Vocational Nurses, Nurse Practitioners, Physical Therapists, Physical Therapy Assistants, Occupational Therapists, Physicians, or Physician's Assistants with active, unrestricted licenses. **Established : 2002** **Term of Certification: 5 years**	**CWS® - Certified Wound Specialist** Credentials are offered to any licensed healthcare professional with a Bachelors, Masters or Doctoral degree in life sciences related field **Established: 1995** **Term of Certification: 10 years**	**CWCA™ - Certified Wound Care Associate** Credentials are offered to any licensed healthcare professional with at least 3 years clinical experience. **Established: 1997** **Term of Certification: 10 years**
Accreditation	**American Board of Nursing Specialties (ABNS)**, the only national body to independently accredit **nursing specialty certification** programs. (CWOCN®, CWCN®, COCN®, CCCN®) **National Commission for Certifying Agencies (NCCA),** an administratively independent resource recognized as the authority on accreditation standards for professional certification organizations/ programs. (CWOCN®, CWCN®, COCN®, CCCN®)	**National Commission for Certifying Agencies (NCCA),** an administratively independent resource recognized as the authority on accreditation standards for professional certification organizations/programs.	**National Commission for Certifying Agencies (NCCA),** an administratively independent resource re-cognized as the authority on accreditation standards for professional certification organizations or programs.	**No independent accreditation** of certification program.

Entry-level Eligibility for Credential(s): Didactic Education and Clinical Training	• RN licensure AND
	• Bachelors Degree or higher AND
	• 40 hours of didactic wound specialty education in a WOCN Society-accredited single specialty wound care program and 20 additional hours dedicated to meet student learning needs AND 40 hours of precepted clinical practice in a WOCN Society accredited single- or tri-specialty wound care program
	
	An experiential pathway is available for nurses that cannot attend a WOCN Society-accredited program.
		• Professions listed above AND
		• Currently active in care of wound patients, or in management, education, or research directly related to wound care while actively licensed for at least two years full-time/four years part-time within the past five years AND
		• Must meet ONE of the following:
		  ◦ 4-day training program consisting of classroom training and lab practice.
		  ◦ Current certification through AAWM or WOCNCB.
		  ◦ Experiential Option
		
		No additional supervised practicum required
			• Occupations listed above AND
			• Must have a Bachelors Degree or higher in a life sciences related field AND
			• Must have three (3) years of clinical experience in wound care
			
			No additional supervised practicum required
				• Occupations listed above AND
				• Must have three (3) years of clinical experience in wound care
				
				No additional didactic education required.
				
				No additional supervised practicum required

Exam Fees	$300 examination fee. No annual maintenance fees.	$330 examination fee. No annual maintenance fees. For those taking the course, exam fee is included in course fee of $2,497.	$550 examination fee with $150 annual fee to maintain certification. ($1900 total)	$300 examination fee with $150 annual fee to maintain. ($1650 total)
Recertification Requirements	Recertification Fee: $300 Successful completion of one of the following: a. Examination b. Portfolio submission (minimum of 10 CE credits plus professional activities or projects related to specialty focus.)	Recertification Fee $330 Successful completion of one of the following: a. Examination b. Wound Management Training Course $530 (No exam required) c. Continuing Education (60 hours) d. Continuing Education and Outreach Program (30 hours plus community outreach, publication, research or leadership)	Recertification Fee: $400 Minimum of (6) CEUs annually. Self-Assessment examination every 10 years.	Recertification Fee: $300 Minimum of (6) CEUs annually. Self-Assessment examination every 10 years.

*References as of 3-27-09: www.wocncb.org; www.aawm.org; www.nawccb.org; www.wcei.net; www.noca.org/noca; www.nursingcertification.org

Clinical Fact Sheet — QUICK ASSESSMENT OF LEG ULCERS

	VENOUS INSUFFICIENCY (STASIS)	ARTERIAL INSUFFICIENCY	PERIPHERAL NEUROPATHY
HISTORY	◆Previous DVT and Varicosities ◆Reduced mobility ◆Obesity ◆Vascular Ulcers ◆Phlebitis ◆Traumatic Injury ◆CHF ◆Orthopedic procedures ◆Pain reduced by elevation	◆Diabetes ◆Anemia ◆Arthritis ◆Increased pain with activity and/or elevation ◆CVA ◆Smoking ◆Intermittant claudication ◆Traumatic injury to extremity ◆Vascular procedures/surgeries ◆Hypertension ◆Hyperlipidemia ◆Arterial Disease	◆Diabetes ◆Spinal Cord injury ◆Hansens' Disease ◆Relief of pain with ambulation ◆Parasthesia of extremities
LOCATION	◆Medical aspect of lower leg and ankle ◆Superior to medical malleolus	◆Toetips or web spaces ◆Phalangeal heads around lateral malleolus ◆Areas exposed to pressure or repetitive trauma	◆Plantar aspect of foot ◆Metatarsal heads ◆Heels ◆Altered pressure points/Sites of Painless Trauma/Repetitive Stress
APPEARANCE	◆Color: base ruddy ◆Surrounding skin: erythema (venous dermatitis) and/or brown staining (hyperpigmentation) ◆Depth: usually shallow ◆Wound margins: irregular ◆Exudate: moderate to heavy ◆Edema: pitting or non-pitting; possible induration and cellulitis ◆Skin temp: normal; warm to touch ◆Granulation: frequently present ◆Infection: less common	◆Color: base of wound, pale/pallor on elevation; dependent rubor ◆Skin: shiny, taut, thin, dry, hair loss lower extremities, atrophy of subcutaneous tissue ◆Depth: deep ◆Wound margins: even ◆Exudate: minimal ◆Edema: variable ◆Skin temp: decreased/cold ◆Granulation tissue: rarely present ◆Infection: frequent (signs may be subtle) ◆Necrosis, eschar, gangrene may be present	◆Color: Normal skin tones; trophic skin changes, fissuring and/or callus formation ◆Depth: variable ◆Wound margins: well defined ◆Exudate: variable ◆Edema: cellulitis, erythema and induration common ◆Skin temp: warm ◆Granulation tissue: frequently present ◆Infection: frequent ◆Necrotic tissue variable, gangrene uncommon ◆Reflexes usually diminished ◆Altered gait; orthopedic deformities common
PERFUSION	**PAIN** ◆Minimal unless infected or desiccated. **PERIPHERAL PULSES** ◆Present/Papable **CAPILLARY REFILL** ◆Normal – less than 3 seconds	**PAIN** ◆Intermittent claudication ◆Resting ◆Positional ◆Nocturnal **PERIPHERAL PULSES** ◆Absent or diminished **CAPILLARY REFILL** ◆Delayed – more than 3 seconds ◆ABI < 0.8	**PAIN** ◆Diminished sensitivity to touch ◆Reduced response to pin prick usually painless **PERIPHERAL PULSES** ◆Palpable/Present **CAPILLARY REFILL** ◆Normal

(Continued on reverse)

WOCN ◆ 4700 W. Lake Avenue ◆ Glenview IL 60025 ◆ (888) 224-WOCN ◆ Website: http://www.wocn.org

INDUSTRY LINKS

Wound Ostomy and Continence Nurses Society

http://www.wocn.org

American Academy of Wound Management

www.aawm.org

National Alliance of Wound Care

www.nawccb.org

American Academy of Wound Care

http://www.sawconline.com

Wound Care Education Institute

http://www.wcei.net

National Pressure Ulcer Advisory Panel

www.npuap.org