

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

CLINICAL BENEFIT	<input type="checkbox"/> MINIMIZE SAFETY RISK OR CONCERN. <input checked="" type="checkbox"/> MINIMIZE HARMFUL OR INEFFECTIVE INTERVENTIONS. <input type="checkbox"/> ASSURE APPROPRIATE LEVEL OF CARE. <input type="checkbox"/> ASSURE APPROPRIATE DURATION OF SERVICE FOR INTERVENTIONS. <input checked="" type="checkbox"/> ASSURE THAT RECOMMENDED MEDICAL PREREQUISITES HAVE BEEN MET. <input type="checkbox"/> ASSURE APPROPRIATE SITE OF TREATMENT OR SERVICE.
Effective date:	7/1/2026

POLICY

Specialized Wound or Burn Care may be considered **medically necessary** for the following types of wounds or burns:

- Requiring non-selective or selective debridement to facilitate healing or due to necrotic tissue, 11000, 11001, 11042, 11043, 11044, 11045, 11046, 11047, 97597, 97598, 97602, 0973T-0976T or;
- Requiring complex dressings, 16020, 16025, 16030, 29581, 29584 or;
- With documentation of signs of infection or risk factors for infection (e.g., diabetes mellitus, moderate dose of steroids, frail, elderly, poor nutrition, ischemia, venous insufficiency, etc.), or;
- 3rd degree or severe 2nd degree burns.

Documentation requirements for medical necessity

The medical necessity for wound or burn care on a continuing basis for a given wound in a given individual is contingent upon evidence documented in the individual's record that the wound is improving in response to the wound care being provided. Evidence of improvement includes measurable changes in at least two of the following:

- Drainage
- Inflammation
- Swelling
- Pain and/or Tenderness
- Wound dimensions (surface measurements, depth)
- Granulation tissue
- Necrotic tissue/slough
- Tunneling or undermining

Such evidence must be documented **each** time the individual is seen. A wound that shows no improvement after 30 days requires a new approach, which may include a physician reassessment of underlying infection, metabolic, nutritional, or vascular problems inhibiting wound healing, or a new treatment approach.

Specialized wound or burn care is considered **investigational** in the following circumstances:

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

- A superficial wound, less than 0.2mm in depth (i.e., abrasion, road rash, etc.), without documentation of signs of infection.
- A small uncomplicated wound (< 0.5 cm. square) in an individual without documentation of risk factors for infection (e.g., diabetes mellitus, moderate dose of steroids, frail, elderly, poor nutrition, ischemia, venous insufficiency, etc.) or signs of infection.
- A mild burn (e.g., 1st degree or small area of 2nd degree)
- There is no documentation of the continued need for debridement, or current wound infection, or complex wounds or dressings.
- The management of acute wounds; the care of wounds that normally heal by primary intention, such as clean, incised traumatic wounds; surgical wounds, which are closed primarily; and other uncomplicated postoperative wound care.

Debridement of the wound(s) if there is no necrotic, devitalized, fibrotic, or other tissue or foreign matter present that would interfere with wound healing is **investigational**.

Procedures performed for cosmetic reasons or to prepare tissues for cosmetic procedures are considered **investigational**.

With appropriate management, it is expected that in most cases a wound will reach a state at which care can be performed primarily in a non-specialized office setting, and ultimately by the individual and/or the individual's caregiver with periodic physician assessment and supervision.

Wound care that can be performed in a non-specialized office setting or by the individual or the individual's caregiver is considered **investigational**.

Electrostimulation and Electromagnetic Therapy

Electrical stimulation for the treatment of wounds including, but not limited to, low-intensity direct current, high-voltage pulsed current, alternating current, and transcutaneous electrical nerve stimulation, is considered **investigational**.

Electrical stimulation performed by individuals in the home setting for the treatment of wounds is considered **investigational**.

Electromagnetic therapy for the treatment of wounds is considered **investigational**.

E0761, E0769, G0281, G0282, G0295, G0329, 0906T, 0907T

Noncontact Ultrasound Treatment for Wounds

Noncontact ultrasound treatment for wounds is considered **investigational**, as there is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

97610

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

Extracorporeal Shock Wave Therapy

The use of extracorporeal shock wave therapy is considered **investigational** as a treatment for wounds, as there is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

0512T, 0513T

Noncontact Radiant Heat Bandage

The use of a noncontact radiant heat bandage is considered **investigational** as a treatment of wounds, as there is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

A6000, E0231, E0232

Ablative Laser Treatment

The use of ablative laser treatment is considered **investigational** as a treatment for wounds, as there is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

17999

Near Infrared Spectroscopy

The use of near-infrared spectroscopy is considered **investigational** as a treatment for wounds. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

0640T, 0859T, 0860T, 0972T

Transcutaneous Visible Light Hyperspectral Imaging

The use of transcutaneous visible light hyperspectral imaging is considered **investigational** as a treatment for wounds. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

93998

Policy Guidelines

Conventional wound care includes optimization of nutritional status, debridement by any means to remove devitalized tissue, maintenance of a clean, moist bed of granulation tissue with appropriate moist dressings, and necessary treatment to resolve any infection that may be present. Conventional wound care based on the specific type of wound includes frequent repositioning of a patient with pressure ulcers (usually every 2 hours), offloading of pressure and good glucose control for diabetic ulcers, establishment of adequate circulation for arterial ulcers, and the use of a compression system for patients with venous ulcers.

Measurable signs of improved healing include a decrease in wound size either in surface area or volume, decrease in amount of exudates, and decrease in amount of necrotic tissue.

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

Cross-References:

MP 1.094 Skin Contact Monochromatic Infrared energy for the Treatment of Cutaneous Ulcers, Diabetic Neuropathy, and other Miscellaneous Musculoskeletal Conditions
MP 2.033 Recombinant and Autologous Platelet-Derived Growth Factors as a Treatment of Wound Healing and Other Non-Orthopedic Conditions
MP 2.070 Hyperbaric Oxygen Therapy (HBO)
MP 4.004 Negative Pressure Wound Therapy in the Outpatient Setting
MP 6.026 Durable Medical Equipment (DME) and Supplies
MP 8.001 Investigational Physical Medicine and Specialized Physical Medicine Interventions (Outpatient)

PRODUCT VARIATIONS

This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations. Please see additional information below.

FEP PPO - Refer to FEP Medical Policy Manual. The FEP Medical Policy manual can be found at: <https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies>

DESCRIPTION/BACKGROUND

This policy discussion of wound care includes burns, which are considered a type of wound. Wound care involves evaluation and treatment of a wound including identifying potential causes of delayed wound healing and modifying treatment as directed by the certifying physician. Determining the agent of delayed wound healing such as vascular disease, infection, diabetes or other metabolic disorders, immunosuppression, unrelieved pressure, radiation injury and malnutrition will help determine the course of treatment. Evaluations could include comprehensive medical evaluation, vascular evaluation, orthopedic evaluation, and metabolic/nutritional evaluation leading to a plan of care. The plan may include metabolic corrections including dietary supplementation, specialized wound care, pressure relief, use of compression to manage edema, debridement and reconstruction, rehabilitation therapy, possible general, vascular and/or orthopedic surgery, and antimicrobial agents.

Referral to a wound care center would be most appropriate for those wounds that require advanced wound care techniques. Referral to a wound care center is not required for uncomplicated wounds, particularly traumatic wounds, in the absence of co-morbid conditions, which predictably impair wound healing (such as diabetes, ischemia, poor nutrition, venous insufficiency, among others). Referral is also impacted by the complexity of the wound (size, depth, infection, underlying exposed tissues) the chronic (or predictable chronic) duration of the wound, its progress toward healing in the primary caregiver's hands, and even the location of the wound (wounds on weight bearing surfaces, those on the head and neck, those on the hands, and other locations, require special consideration).

Wound care centers are available to treat complicated wounds, but in many communities the experience, training, judgment, skill, and background to treat complex wounds also exists

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

among vascular, general, plastic, orthopedic and other surgeons, dermatologists, podiatrists, or primary care physicians.

Wound care centers generally do not perform extensive surgical services, which may be required for optimal care. Such procedures may include debridement (minor debridement in the wound care center is appropriate), bypass or other vascular repair, plastic surgical reconstructions, flaps, amputations, and other procedures. Early surgical consultation for such procedures should be sought and the wound care center should not simply continue with more conservative measures when surgical treatment is necessary. There are some wounds which prove to be essentially chronic, and with which the patient will live indefinitely.

Active Wound Care Management Procedures

Active wound care procedures are performed to remove devitalized tissue and promote healing and involve selective and non-selective debridement techniques.

- **Wound Care Selective Debridement**

Debridement is usually indicated whenever necrotic tissue is present on an open wound and may be indicated in cases of abnormal wound healing or repair. Debridement techniques usually progress from non-selective to selective but can be combined. Selective debridement should only be done under the specific order of a physician. Wound care selective treatments include:

- Conservative sharp debridement: Conservative sharp debridement is the classical method of selective wound debridement. Scalpel, curettes, scissors, and tweezers/forceps may be used and only clearly identified devitalized tissue is removed. Conservative sharp debridement is a minor procedure that typically requires no anesthesia and generally results in no bleeding.
- High Pressure Water Jet: Whirlpool provides a means where a wound can be submerged in water and, if appropriate, an additive agent is used for cleansing. Generally, whirlpool treatments do not require the skills of a physical therapist to perform, although a therapist may be required for an accurate assessment of the medical necessity of the whirlpool for the specific wound type. The skills, knowledge and judgment of a qualified physical therapist might be required when the patient's condition is complicated by circulatory deficiency, areas of desensitization, complex open wounds, and fractures. Immersion in the whirlpool to facilitate removal of a dressing would not be considered a skilled treatment modality.
- Lavage (non-immersion hydrotherapy) involves the use of an irrigation device, with or without pulsation, to provide a water jet to administer a shearing effect to loosen debris within a wound. Some electric pulsatile irrigation devices include suction to remove debris from the wound after it is irrigated. This does not include the Ultrasonic Wound Therapy System (MIST) system (see below).

- **Wound Care Non-Selective Debridement**

These treatments include the following:

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

- Blunt Debridement: Blunt debridement is the removal of necrotic tissue by cleansing, scraping, chemical application or wet to dry dressing technique. It may also involve the cleaning and dressing of small or superficial lesions. Generally, this is not a skilled service and does not require the skills of a physician, podiatrist, therapist, or wound care nurse.
- Enzymatic Debridement: Debridement with topical enzymes is used when the necrotic substances to be removed from a wound are protein, fiber, and collagen. The manufacturers' product insert contains indications, contraindications, precautions, dosage, and administration guidelines; and it is the clinician's responsibility to comply with those guidelines.
- Autolytic Debridement: This type of debridement is indicated where manageable amounts of necrotic tissue are present, and there is no infection. Autolytic debridement occurs when the enzymes that are naturally found in wound fluids are sequestered under synthetic dressings; it is contraindicated for infected wounds.
- Mechanical Debridement: Wet-to-dry dressings may be used with wounds that have a high percentage of necrotic tissue. Wet-to-dry dressings should be used cautiously as maceration of surrounding tissue may hinder healing.
- Jet Hydrotherapy and Wound Irrigation: Mechanical debridement is used to remove necrotic tissue. They also should be used cautiously as maceration of surrounding tissue may hinder healing. Documentation must support the use of skilled personnel in order to be considered a skilled service.

Ultrasound Treatment for Wounds

Ultrasound (US) delivers mechanical vibration above the upper threshold of human hearing (>20 kHz). US in the megahertz range (1-3 MHz) has been used to treat musculoskeletal disorders, often by physical therapists. Although the exact mechanism underlying its clinical effects is not known, therapeutic US has been shown to have a variety of effects at a cellular level, including angiogenesis, leukocyte adhesion, growth factor, collagen production, and increases in macrophage responsiveness, fibrinolysis, and nitric oxide levels. The therapeutic effects of US energy in the kilohertz range have also been examined. Although the precise effects are not known, the low-frequency US in this range may improve wound healing via the production, vibration, and movement of micron-sized bubbles in the coupling medium and tissue.

The mechanical energy from the US is typically transmitted to the tissue through a coupling gel. Several high-intensity US devices with contact probes are currently available for wound debridement. Low-intensity US devices have been developed that do not require coupling gel or other direct contact. The MIST Therapy System delivers a saline mist to the wound with low-frequency US (40 KHz). A second device, the Qoustic Wound Therapy System, also uses sterile saline to deliver US energy (35 KHz) for wound debridement and irrigation.

US is intended as an adjunct to standard wound care. Therefore, the evidence is needed that demonstrates US plus standard wound care provides superior wound closure outcomes compared with standard wound care alone.

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

The primary endpoints of interest for trials of wound closure are as follows, consistent with 2006 guidance from the U.S. Food and Drug Administration (FDA) for the industry in developing products for the treatment of chronic cutaneous ulcer and burn wounds:

- Incidence of complete wound closure.
- Time to complete wound closure (reflecting accelerated wound closure).
- Incidence of complete wound closure following surgical wound closure.
- Pain control.

Regulatory Status

In 2005, the MIST Therapy® device (Celleration) was cleared for marketing by the FDA through the 510(k) process “to promote wound healing through wound cleansing and maintenance debridement by the removal of yellow slough, fibrin, tissue exudates, and bacteria.” In February 2015, Celleration was acquired by Alliqua Biomedical (Langhorne, PA). In August 2020, Sanuwave acquired related UltraMIST System assets.

In 2007, the AR1000 Ultrasonic Wound Therapy System (Arobella Medical, Minnetonka, MN) was cleared for marketing by the FDA through the 510(k) process, listing the MIST Therapy® system and several other ultrasonic wound debridement and hydrosurgery systems as predicate devices. The AR1000 system probe uses “contact or noncontact techniques to achieve intended wound therapy modalities to promote wound healing.” Indications in the 510(k) summary are listed as “Selective and non-selective dissection and fragmentation of soft and or hard tissue” and “Surgical, excisional or sharp edge wound debridement (acute and chronic wounds, burns) for the removal of nonviable tissue including but not limited to diseased tissue, necrotic tissue, slough and eschar, fibrin, tissue exudates, bacteria and other matter.” This device is now known as the Qoustic Wound Therapy System™.

Several other devices have been approved as being substantially equivalent to the earlier devices. FDA product code: NRB.

Electrostimulation and Electromagnetic Therapy for the Treatment of Wounds

Standard Treatment

Conventional or standard therapy for chronic wounds involves local wound care, as well as systemic measures including debridement of necrotic tissues, wound cleansing, and dressing that promotes a moist wound environment, antibiotics to control infection, and optimizing nutritional supplementation. Avoidance of weight-bearing is another important component of wound management.

Electrostimulation

Since the 1950s, investigators have used electrostimulation to promote wound healing, based on the theory that electrostimulation may:

- Increase adenosine 5'-triphosphate concentration in the skin
- Increase DNA synthesis
- Attract epithelial cells and fibroblasts to wound sites
- Accelerate the recovery of damaged neural tissue

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

- Reduce edema
- Increase blood flow
- Inhibit pathogenesis.

Electrostimulation refers to the application of electrical current through electrodes placed directly on the skin near the wound. The types of electrostimulation and devices can be categorized into groups based on the type of current. This includes low-intensity direct current, high-voltage pulsed current, and alternating current.

Electromagnetic Therapy

Electromagnetic therapy is a related but distinct form of treatment that involves the application of electromagnetic fields, rather than direct electrical current.

Regulatory Status

No electrostimulation or electromagnetic therapy devices have received approval from the U.S. Food and Drug Administration specifically for the treatment of wound healing. A number of devices have been cleared for marketing for other indications. Use of these devices for wound healing is off label.

Noncontact Radiant Heat Bandage

The optimal environment for wound healing is thought to include a moist warm environment. Warm-Up Active Wound Therapy™ is a device approved by the FDA that attempts to create this environment. The device includes a noncontact bandage and a warming unit. Treatments are typically administered three times per day for one hour per session.

Extracorporeal Shock Wave Therapy

Extracorporeal Shock Wave Therapy (ESWT) was originally used for stone management in urology and was subsequently introduced as treatment for various musculoskeletal disorders. Today, the application of ESWT have been expanded to new therapeutic fields including wound healing and has offered a potential solution for improving the wound-healing process.

Ablative Laser Treatment

Ablative fractional lasers have recently been employed for the treatment of hypertrophic and function-limiting scars. This therapy has been shown to induce healing of chronic wounds in patients with persistent ulcers and erosions within traumatic scars. Recent reports suggest it may be applicable to other types of chronic wounds as well. The mechanism of action for this modality has yet to be discovered but possible factors include laser-induced collagen remodeling, photomicrodebridement and disruption of biofilms, and induction of a proper wound healing cascade.

Near Infrared Spectroscopy

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

Near Infrared Spectroscopy (NIRS) is a noninvasive modality that measures maximum light absorption wavelengths of different components, including oxygen saturation, hemoglobin content, and water content, around wound sites. NIR imaging can also be used to estimate the depth of burn wounds. In addition, it has been utilized to monitor the wound healing process. However, due to the potential overlap/shifting of the absorption wavelengths of various components, NIRS can sometimes lack specificity.

Transcutaneous Visible Light Hyperspectral Imaging

HyperMed Imaging’s product, HyperView™, is a handheld, battery operated, portable diagnostic imaging device that is used to assess tissue oxygenation without contacting the patient. The product is intended for use by physicians and healthcare professionals as a noninvasive tissue oxygenation measurement system that reports an approximate value of oxygen saturation (O2Sat), oxyhemoglobin level (Oxy), and deoxyhemoglobin level (Deoxy) in superficial tissue. The HyperView system displays two-dimensional, color-coded images of tissue oxygenation of the scanned surface. Images and data provide hyperspectral tissue oxygenation measurements for selected tissue regions. The product is indicated for use to determine oxygenation levels in superficial tissues for patients with potential circulatory compromise, such as wound healing, diabetic foot ulcers, amputation, and critical limb ischemia.

Regulatory Status

The HyperView™ system was cleared via the FDA’s 501(k) process on December 16, 2016.
Product Code: MUD

RATIONALE

Ultrasound Treatment for Wounds: Summary of Evidence

For individuals who have any wound type (acute or nonhealing) who receive ultrasound therapy plus standard wound care, the evidence includes RCTs and systematic reviews. Relevant outcomes are symptoms, change in disease status, morbid events, quality of life, and treatment-related morbidity. The single double-blinded, sham-controlled randomized trial, which included patients with nonhealing diabetic foot ulcers, had substantial methodologic flaws (e.g., high dropout rate, baseline differences between groups) that limit the validity of the findings. In the remaining studies comprising the evidence base, all but 1 RCT comparing noncontact low-frequency ultrasound (NLFU) with standard wound care reported improved (statistically significant) results on the primary outcome with NLFU. However, these studies also had several methodologic limitations. Complete healing is the most clinically relevant outcome. None of the RCTs evaluating venous leg ulcers reported complete healing as its primary outcome measure, and none had blinded outcome assessment. Only 1 RCT, which addressed split-thickness graft donor sites, reported on the proportion of patients with complete healing and had blinded outcome assessment. Another limitation of the body of evidence is that some standard of care interventions involved fewer visits than the NLFU intervention, and the differences in intensity of care resulting from this differential in face-to-face contact could partially explain the difference in

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

findings between intervention and control groups. The evidence is insufficient to determine the effects of the technology on health outcomes.

Electrostimulation and Electromagnetic Therapy for Treating Wounds: Summary of Evidence

For individuals who have any wound type (acute or nonhealing) who receive electrostimulation, the evidence includes systematic reviews, a meta-analysis, and RCTs. Relevant outcomes are symptoms, change in health status, morbid events, quality of life, and treatment-related morbidity. Systematic reviews of RCTs on electrical stimulation have reported improvements in some outcomes, mainly intermediate outcomes such as a decrease in wound size and/or the velocity of wound healing. There are few analyses on the more important clinical outcomes of complete healing and the time to complete healing, and many of the trials are of relatively low quality. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have any wound type (acute or nonhealing) who receive electromagnetic therapy, the evidence includes two systematic reviews of RCTs (one on pressure ulcers and the other on leg ulcers) and an RCT of electromagnetic treatment following Cesarean section. Relevant outcomes are symptoms, change in health status, morbid events, quality of life, and treatment-related morbidity. The systematic reviews identified a few RCTs with small sample sizes that do not permit drawing definitive conclusions. The evidence is insufficient to determine the effects of the technology on health outcomes.

Noncontact Radiant Heat Bandage for the Treatment of Wounds: Summary of Evidence

Standard components of wound care include sharp debridement of devitalized tissue, infection control, non-weight bearing, and treatment of underlying co-morbidities, such as adequate nutrition or glycemic control in diabetics. Therefore, validation of any adjunct to standard wound management requires a randomized controlled trial to isolate the contribution of the intervention compared to underlying wound management. A literature review identified one small, randomized crossover trial of warm-up active wound therapy involving thirteen patients who were followed up for 2 weeks. Compared to the control group, more patients in the treatment group improved (62.5% vs. 37.5%). However, the term “improvement” was not fully defined, and no statistical analysis was provided. Santilli and colleagues reported a 2-week trial of warm-up active wound therapy in which seventeen patients with thirty-one wounds served as their own control. Almost half of these patients, all refractory to prior therapy, reported complete healing within 12 weeks after treatment. While studies of wound-healing therapies frequently use patients as their own control, this trial design cannot isolate the contribution of the intervention. It is possible that the wound-healing effect may be in part due to increased attentiveness to underlying wound care rather than to the warm-up active wound therapy itself. Finally, Cherry and Wilson reported on a case series of five patients who received a 2-week trial of warm-up active wound therapy. Although four of the five patients reported complete healing at 6 to 14 weeks after treatment, again a case series does not permit isolation of the contribution of the warm-up therapy. In addition, both in this trial and in the previous trial reviewed, it should be noted that wound healing occurred several weeks after discontinuation of the warm-up therapy,

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

further confounding any evaluation of the therapy. The evidence is insufficient to determine the effects of the technology on health outcomes.

Extracorporeal Shock Wave Therapy: Summary of evidence

For individuals who have any wound type who receive extracorporeal shock wave therapy plus standard wound care, the evidence includes RCTs and systematic reviews. ESWT showed therapeutic effects on acute and chronic soft tissue wound of different etiologies. However, the effectiveness of ESWT still requires further high quality, well-controlled RCTs with an adequate sample size because the existing clinical and experimental evidence has been limited. Furthermore, optimal ESWT regimens and dosages are required to provide evidence-based therapeutic guidance. The evidence is insufficient to determine the effects of the technology on health outcomes.

Ablative Laser Treatment

There are limited studies, and overall effectiveness cannot be demonstrated. Larger, randomized, and controlled trials will need to be conducted to best determine appropriate treatment protocols. The evidence is insufficient to determine the effects of the technology on health outcomes.

Near Infrared Spectroscopy

There are limited studies and overall small sample sizes on this imaging and overall effectiveness cannot be demonstrated. The evidence is insufficient to determine the effects of the technology on health outcomes.

Transcutaneous Visible Light Hyperspectral Imaging

There are limited studies and proven efficacy on this imaging and overall effectiveness cannot be demonstrated. The evidence is insufficient to determine the effects of the technology on health outcomes.

DEFINITIONS

N/A

DISCLAIMER

Capital Blue Cross' medical policies are used to determine coverage for specific medical technologies, procedures, equipment, and services. These medical policies do not constitute medical advice and are subject to change as permitted by law or applicable clinical evidence from independent treatment guidelines. Treating providers are solely responsible for medical advice and treatment of members. These policies are not a guarantee of coverage or payment. Payment of claims is subject to a determination regarding the member's benefit program and eligibility on the date of service, and a determination that the services are

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

medically necessary and appropriate. Final processing of a claim is based upon the terms of contract that applies to the members' benefit program, including benefit limitations and exclusions. If a provider or a member has a question concerning this medical policy, please contact Capital Blue Cross' Provider Services or Member Services.

CODING INFORMATION

Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

Noncontact Ultrasound Treatment for Wounds is Investigational; therefore, not covered:

Procedure Codes								
97610								

Extracorporeal Shock Wave Therapy is Investigational; therefore, not covered:

Procedure Codes								
0512T	0513T							

Electrostimulation for wounds, Electrostimulation for home use, and Electromagnetic Therapy for the Treatment of Wounds is Investigational; therefore, not covered:

Procedure Codes								
E0761	E0769	G0281	G0282	G0295	G0329	0906T	0907T	

Noncontact Radiant Heat Bandage is Investigational; therefore, not covered:

Procedure Codes								
A6000	E0231	E0232						

Ablative laser treatment is Investigational; therefore, not covered:

Procedure Codes								
17999								

Near-infrared spectroscopy is Investigational; therefore, not covered:

Procedure Codes								
0640T	0859T	0860T	0972T					

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

Transcutaneous visible light hyperspectral imaging is Investigational; therefore, not covered:

Procedure Codes							
93998							

Covered when medically necessary:

Procedure Codes							
11000*	11001*	11042*	11043*	11044*	11045*	11046*	11047*
16020*	16025*	16030*	29581*	29584*	97597*	97598*	97602*
0973T*	0974T*	0975T*	0976T*				

*Appropriate ICD-10 codes for specialized wound or burn care could potentially involve any wound or burn diagnosis.

REFERENCES

Ultrasound Treatment for Wounds

1. Center for Drug Evaluation and Research, Center for Biologics Evaluation and Research, Center for Devices and Radiological Health. *Guidance for Industry: Chronic Cutaneous Ulcer and Burn Wounds -- Developing Products for Treatment*. Rockville, MD: Food and Drug Administration; 2006 June.
2. Food and Drug Administration. *MIST[™] Therapy System: 510(k) Premarket Notification: K050129*.
3. Food and Drug Administration. *510(k) Summary: 510(k) -AR1000 Series K131096, Arobella Medical, LLC. 2014*.
4. Tricco AC, Antony J, Vafaei A, et al. Seeking effective interventions to treat complex wounds: an overview of systematic reviews. *BMC Med*. Apr 22, 2015; 13: 89. PMID 25899006
5. Voigt J, Wendelken M, Driver V, et al. Low-frequency ultrasound (20-40 kHz) as an adjunctive therapy for chronic wound healing: a systematic review of the literature and meta-analysis of eight randomized controlled trials. *Int J Low Extrem Wounds*. Dec 2011; 10(4): 190-9. PMID 22184750
6. Ennis WJ, Foremann P, Mozen N, et al. Ultrasound therapy for recalcitrant diabetic foot ulcers: results of a randomized, double-blind, controlled, multicenter study. *Ostomy Wound Manage*. Aug 2005; 51(8): 24-39. PMID 16234574
7. Peschen M, Weichenthal M, Schopf E, et al. Low-frequency ultrasound treatment of chronic venous leg ulcers in an outpatient therapy. *Acta Derm Venereol*. Jul 1997; 77(4): 311-4. PMID 9228227
8. Chang YR, Perry J, Cross K. Low-Frequency Ultrasound Debridement in Chronic Wound Healing: A Systematic Review of Current Evidence. *Plast Surg (Oakv)*. Feb 2017; 25(1): 21-26. PMID 29026808
9. Kavros SJ, Miller JL, Hanna SW. Treatment of ischemic wounds with noncontact, low-frequency ultrasound: the Mayo clinic experience, 2004-2006. *Adv Skin Wound Care*. Apr 2007; 20(4): 221-6. PMID 17415030

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

10. Hu X, Meng H, Liang J, et al. Comparison of the efficacy of 12 interventions in the treatment of diabetic foot ulcers: a network meta-analysis. *PeerJ*. 2025; 13: e19809. PMID 40821981
11. Beheshti A, Shafigh Y, Parsa H, et al. Comparison of high-frequency and MIST ultrasound therapy for the healing of venous leg ulcers. *Adv Clin Exp Med*. Nov-Dec 2014; 23(6): 969-75. PMID 25618125
12. Olyaie M, Rad FS, Elahifar MA, et al. High-frequency and noncontact low-frequency ultrasound therapy for venous leg ulcer treatment: a randomized, controlled study. *Ostomy Wound Manage*. Aug 2013; 59(8): 14-20. PMID 23934374
13. White J, Ivins N, Wilkes A, et al. Non-contact low-frequency ultrasound therapy compared with UK standard of care for venous leg ulcers: a single-centre, assessor-blinded, randomised controlled trial. *Int Wound J*. Oct 2016; 13(5): 833-42. PMID 25619411
14. Gibbons GW, Orgill DP, Serena TE, et al. A prospective, randomized, controlled trial comparing the effects of noncontact, low-frequency ultrasound to standard care in healing venous leg ulcers. *Ostomy Wound Manage*. Jan 2015; 61(1): 16-29. PMID 25581604
15. Prather JL, Tummel EK, Patel AB, et al. Prospective Randomized Controlled Trial Comparing the Effects of Noncontact Low-Frequency Ultrasound with Standard Care in Healing Split-Thickness Donor Sites. *J Am Coll Surg*. Aug 2015; 221(2): 309-18. PMID 25868409
16. Gottrup F, Apelqvist J, Price P. Outcomes in controlled and comparative studies on non-healing wounds: recommendations to improve the quality of evidence in wound management. *J Wound Care*. Jun 2010; 19(6): 237-68. PMID 20551864
17. Association for the Advancement of Wound Care (AAWC). *Guideline of Pressure Ulcer Guidelines*. 2010.
18. Association for the Advancement of Wound Care (AAWC). *International Consolidated Venous Ulcer Guideline (ICVUG) 2015 (Update of AAWC Venous Ulcer Guideline, 2005 and 2010)*. 2015.
19. National Institute for Health and Care Excellence. *Medical technologies guidance (MTG5): The MIST Therapy system for the promotion of wound healing*. July 25, 2011; <https://www.nice.org.uk/guidance/mtg5/chapter/1-Recommendations>. Accessed November 23, 2025.
20. O'Donnell TF, Passman MA, Marston WA, et al. Management of venous leg ulcers: clinical practice guidelines of the Society for Vascular Surgery (R) and the American Venous Forum. *J Vasc Surg*. Aug 2014; 60(2 Suppl): 3S-59S. PMID 24974070
21. Hingorani A, LaMuraglia GM, Henke P, et al. The management of diabetic foot: A clinical practice guideline by the Society for Vascular Surgery in collaboration with the American Podiatric Medical Association and the Society for Vascular Medicine. *J Vasc Surg*. Feb 2016; 63(2 Suppl): 3S-21S. PMID 26804367
22. Gould LJ, Alderden J, Aslam R, et al. WHS guidelines for the treatment of pressure ulcers- 2023 update. *Wound Repair Regen*. 2024; 32(1): 6-33. PMID 37970711

Electrostimulation and Electromagnetic Therapy for Treating Wounds

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

1. Barnes R, Shahin Y, Gohil R, et al. Electrical stimulation vs. standard care for chronic ulcer healing: a systematic review and meta-analysis of randomised controlled trials. *Eur J Clin Invest.* Apr 2014; 44(4): 429-40. PMID 24456185
2. Franek A, Kostur R, Polak A, et al. Using high-voltage electrical stimulation in the treatment of recalcitrant pressure ulcers: results of a randomized, controlled clinical study. *Ostomy Wound Manage.* Mar 2012; 58(3): 30-44. PMID 22391955
3. Houghton PE, Campbell KE, Fraser CH, et al. Electrical stimulation therapy increases rate of healing of pressure ulcers in community-dwelling people with spinal cord injury. *Arch Phys Med Rehabil.* May 2010; 91(5): 669-78. PMID 20434602
4. Kawasaki L, Mushahwar VK, Ho C, et al. The mechanisms and evidence of efficacy of electrical stimulation for healing of pressure ulcer: a systematic review. *Wound Repair Regen.* Mar-Apr 2014; 22(2): 161-73. PMID 24372691
5. Lala D, Spaulding SJ, Burke SM, et al. Electrical stimulation therapy for the treatment of pressure ulcers in individuals with spinal cord injury: a systematic review and meta-analysis. *Int Wound J.* Dec 2016; 13(6): 1214-1226. PMID 25869151
6. Liu LQ, Moody J, Traynor M, et al. A systematic review of electrical stimulation for pressure ulcer prevention and treatment in people with spinal cord injuries. *J Spinal Cord Med.* Nov 2014; 37(6): 703-18. PMID 24969965
7. Thakral G, La Fontaine J, Kim P, et al. Treatment options for venous leg ulcers: effectiveness of vascular surgery, bioengineered tissue, and electrical stimulation. *Adv Skin Wound Care.* Apr 2015; 28(4): 164-72. PMID 25775200
8. Zheng Y, Du X, Yin L, et al. Effect of electrical stimulation on patients with diabetes-related ulcers: a systematic review and meta-analysis. *BMC Endocr Disord.* Apr 27 2022; 22(1): 112. PMID 35477391
9. Arora M, Harvey LA, Glinsky JV, et al. Electrical stimulation for treating pressure ulcers. *Cochrane Database Syst Rev.* Jan 22, 2020; 1: CD012196. PMID 31962369
10. Girgis B, Duarte JA. High Voltage Monophasic Pulsed Current (HVMPC) for stage II-IV pressure ulcer healing. A systematic review and meta-analysis. *J Tissue Viability.* Nov 2018; 27(4): 274-284. PMID 30177421
11. Khouri C, Kotzki S, Roustit M, et al. Hierarchical evaluation of electrical stimulation protocols for chronic wound healing: An effect size meta-analysis. *Wound Repair Regen.* Sep 2017; 25(5): 883-891. PMID 29052946
12. Aziz Z, Flemming K. Electromagnetic therapy for treating pressure ulcers. *Cochrane Database Syst Rev.* Dec 12, 2012; 12: CD002930. PMID 23235593
13. Aziz Z, Cullum N. Electromagnetic therapy for treating venous leg ulcers. *Cochrane Database Syst Rev.* Jul 02, 2015; (7): CD002933. PMID 26134172
14. Khooshideh M, Latifi Rostami SS, Sheikh M, et al. Pulsed Electromagnetic Fields for Postsurgical Pain Management in Women Undergoing Cesarean Section: A Randomized, Double-Blind, Placebo-controlled Trial. *Clin J Pain.* Feb 2017; 33(2): 142-147. PMID 28060214
15. Qaseem A, Humphrey LL, Forciea MA, et al. Treatment of pressure ulcers: a clinical practice guideline from the American College of Physicians. *Ann Intern Med.* Mar 03, 2015; 162(5): 370-9. PMID 25732279

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

16. American College of Physicians (ACP). Inactive ACP guidelines. <https://www.acponline.org/clinical-information/guidelines/inactive-acp-guidelines>. Accessed November 19, 2025.
17. Bolton LL, Girolami S, Corbett L, et al. The Association for the Advancement of Wound Care (AAWC) venous and pressure ulcer guidelines. *Ostomy Wound Manage*. Nov 2014; 60(11): 24-66. PMID 25380098
18. Association for the Advancement of Wound Care (AAWC). Association for the Advancement of Wound Care guideline of pressure ulcer guidelines. Malvern, PA: AAWC; 2010.
19. Gould LJ, Alderden J, Aslam R, et al. WHS guidelines for the treatment of pressure ulcers-2023 update. *Wound Repair Regen*. 2024; 32(1): 6-33. PMID 37970711
20. Lavery LA, Suludere MA, Attinger CE, et al. WHS (Wound Healing Society) guidelines update: Diabetic foot ulcer treatment guidelines. *Wound Repair Regen*. 2024; 32(1): 34-46. PMID 38032324
21. Wound, Ostomy and Continence Nurses Society-Wound Guidelines Task Force. WOCN 2016 Guideline for Prevention and Management of Pressure Injuries (Ulcers): An Executive Summary. *J Wound Ostomy Continence Nurs*. May/June 2017; 44(3): 241-246. PMID 28472816
22. Bonham PA, Droste LR, González A, et al. 2024 Guideline for Management of Wounds in Patients With Lower Extremity Arterial Disease: An Executive Summary. *J Wound Ostomy Continence Nurs*. Sep-Oct 2024; 51(5): 357-370. PMID 39313970
23. Centers for Medicare & Medicaid Services (CMS). National Coverage Determination (NCD) for Electrical Stimulation (ES) and Electromagnetic Therapy for the Treatment of Wounds (270.1). 2004.

Other references

1. Alvarez O, Patel M, Rogers R et al. Effect of non-contact normothermic wound therapy on the healing of diabetic neuropathic foot ulcers. *J Tissue Viability* 2006; 16(1):8-11.
2. Chaby, Senet Vaneau et al. Dressings for acute and chronic wounds: A systematic review. *Arch Dermatol* 2007; 143: 1297-1304
3. Cherry GW, Wilson J. The treatment of ambulatory venous ulcer patients with warming therapy. *Ostomy Wound Manage* 1999; 45(9):65-70.
4. Driver VR, Yao M, Miller CJ. Noncontact low-frequency ultrasound therapy in the treatment of chronic wounds: A meta-analysis. *Wound Rep Reg*. 2011;19(4):475-480.
5. Ennis WJ, Foremann P, Mozen N, et al. Ultrasound therapy for recalcitrant diabetic foot ulcers: results of a randomized, double-blind, controlled, multicenter study. *Ostomy Wound Manage*. 2005;51(8):24-39.
6. Franek A, Kostur R, Polak A, et al. Using high-voltage electrical stimulation in the treatment of recalcitrant pressure ulcers: results of a randomized, controlled clinical study. *Ostomy Wound Manage*. Mar 2012;58(3):30-44. PMID 22391955
7. Houghton PE, Campbell KE, Fraser CH, et al. Electrical stimulation therapy increases rate of healing of pressure ulcers in community-dwelling people with spinal cord injury. *Arch Phys Med Rehabil*. 2010;91(5):669-678.
8. Jones, Fennie, Lenihan. Chronic wounds: Factors influencing healing within 3 months and non-healing after 5-6 months of care. *Wounds* 2007; 19: 51-63.

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

9. Karr JC. External thermoregulation of wounds associated with lower-extremity osteomyelitis. A pilot study. *J Am Podiatr Med Assoc* 2003; 93(1):18-22.
10. Kavros SJ, Miller JL, Hanna SW. Treatment of ischemic wounds with noncontact, low-frequency ultrasound: the Mayo Clinic experience, 2004-2006. *Adv Skin Wound Care*. 2007;20(4):221-226.
11. Kawasaki L, Mushahwar VK, Ho C, et al. The mechanisms and evidence of efficacy of electrical stimulation for healing of pressure ulcer: a systematic review. *Wound Repair Regen*. Mar-Apr 2014;22(2):161-173. PMID 24372691
12. Kloth LC, Berman JE, Nett M et al. A randomized controlled clinical trial to evaluate the effects of noncontact normothermic wound therapy on chronic full-thickness pressure ulcers. *Adv Skin Wound Care* 2002; 15(6):270-6.
13. Armstrong D, de Asla RJ. Management of diabetic foot ulcers. In: *UpToDate Online Journal* [serial online]. Waltham, MA: UpToDate; updated October 30, 2024. Literature review current through December 2024.
14. McCulloch J, Knight CA. Noncontact normothermic wound therapy and offloading in the treatment of neuropathic foot ulcers in patients with diabetes. *Ostomy Wound Manage* 2002; 48(3):38-44.
15. Robinson C, Santilli SM. Warm-Up Active Wound Therapy: a novel approach to the management of chronic venous stasis ulcers. *J Vasc Nurs* 1998; 16(2):38-42.
16. Santilli SM, Valusek PA, Robinson C. Use of a noncontact radiant heat bandage for the treatment of chronic venous stasis ulcers. *Adv Wound Care* 1999; 12(2):89-93.
17. Smith F, Dryburgh N, Donaldson J, Mitchell M. Debridement for surgical wounds. *Cochrane Database Syst Rev*. 2013;2013(9):CD006214. Published 2013 Sep 5. doi:10.1002/14651858.CD006214.pub4.
18. Vanceau, Chaby, Guillot et al. Consensus panel recommendations for chronic and acute wound dressings. *Arch Dermatol* 2007; 143: 1291-1294.
19. Department of Health & Human Services. Food and Drug Administration. *Hyperview Hyperspectral Tissue Oxygenation Measurement System*.
20. Nouvong A, Hoogwerf B, Mohler E, et al. Evaluation of Diabetic Foot Ulcer Healing with Hyperspectral Imaging of Oxyhemoglobin and Deoxyhemoglobin. *Diabetes Care*. 2009 Nov; 32(11):2056-2061. PMID 19641161
21. Chin JA, Wang EC, Kibbe MR. Evaluation of hyperspectral technology for assessing the presence and severity of peripheral artery disease. *J Vasc Surg*. 2011 Dec; 54(6):1679-88. PMID 21803525
22. Weingarten MS, Neidrauer M, Mateo A, et al. Prediction of wound healing in human diabetic foot ulcers by diffuse near-infrared spectroscopy: A pilot study. *Wound Repair Regen*. 2010;18(2):180-185 PMID: 23110417
23. Li S, Mohamedi AH, Senkowsky J, Nair A, Tang L. Imaging in Chronic Wound Diagnostics. *Adv Wound Care (New Rochelle)*. 2020;9(5):245-263. doi:10.1089/wound.2019.0967.
24. Gould L, Stuntz M, Giovannelli M, et al. Wound Healing Society 2015 update on guidelines for pressure ulcers. *Wound Repair Regen*. 2016;24(1):145-162. doi:10.1111/wrr.12396.

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

25. Morton LM, Dover JS, Phillips TJ, Krakowski AC, Uebelhoer NS. Treatment of ulcers with ablative fractional lasers. *Semin Cutan Med Surg.* 2015;34(1):37-41. doi:10.12788/j.sder.2015.0128.
26. Zhang L, Fu XB, Chen S, Zhao ZB, Schmitz C, Weng CS. Efficacy and safety of extracorporeal shock wave therapy for acute and chronic soft tissue wounds: A systematic review and meta-analysis. *Int Wound J.* 2018;15(4):590-599. doi:10.1111/iwj.12902
27. Lu Q, Yin Z, Shen X, Li J, Su P, Feng M, Xu X, Li W, He C, Shen Y. Clinical effects of high-intensity laser therapy on patients with chronic refractory wounds: a randomised controlled trial. *BMJ Open.* 2021 Jul 12;11(7):e045866. doi: 10.1136/bmjopen-2020-045866. PMID: 34253665; PMCID: PMC8276284
28. Yue J, Zhang S, Sun Q, et al. Local warming therapy for treating chronic wounds: a systematic review. *Medicine (2018)* 97(12):e9931.

POLICY HISTORY

MP 4.028	06/26/2020 Consensus Review. Policy statement unchanged. References updated.
	06/14/2021 Administrative Update. Added new codes 0640T, 0641T, and 0642T codes to coding section of policy.
	06/17/2021 Minor Review. Addition of criteria statement for Noncontact near-infrared spectroscopy and transcutaneous visible light hyperspectral. Background, rationale, references, and coding updated.
	09/30/2022 Minor Review. Clarified statement on electrostimulation by removing TENS language. Removed “noncontact” from NIRS heading. Updated FEP, background, rationale, coding, and references.
	12/01/2022 Administrative Update. Deleted code 0491T, 0492T & 0493T; effective 01/01/2023.
	05/25/2023 Administrative Update. Added codes 17999, 0479T, and 0480T for ablative laser treatment. Effective 07/01/2023
	10/05/2023 Administrative Update. Removed codes 0479T and 0480T and placed in MP 1.004.
	12/12/2023 Administrative Update. Added 0859T-0860T. Deleted 0641T-0642T
	01/31/2024 Minor Review. Electrostimulation is now MN with criteria. Created policy guidelines. Updated references. Code G0281 moved to MN coding table. Dx table now only relevant to Electrical Stimulation MN indication.
	12/11/2024 Administrative Update. Added 0906T, 0907T. Effective 01/01/2025.
	01/09/2025 Minor Review. NMN statements updated to INV. Electrical Stimulation is now INV. Ultrasound statement only applies to noncontact. Updated coding table to incorporate statement changes. Policy guidelines and references updated.
	06/10/2025 Administrative Update. Added codes 0972T-0976T. Effective 07/01/2025.
06/26/2025 Administrative Update. Removed Benefit Variations Section and updated Disclaimer.	

MEDICAL POLICY

POLICY TITLE	WOUND & BURN MANAGEMENT & SPECIALIZED TREATMENT CENTERS
POLICY NUMBER	MP 4.028

<p>08/15/2025 Consensus Review. Updated background and references. Removed code 0631T as its been deleted eff 01/01/2026, added 17999 for Transcutaneous Visible Light Hyperspectral Imaging.</p>
<p>01/29/2026 Consensus Review. Editorial refinements to policy statement; no change to intent. Updated cross-references and references. Added 93998 to represent transcutaneous visible light hyperspectral imaging.</p>

Health care benefit programs issued or administered by Capital Blue Cross and/or its subsidiaries, Capital Advantage Insurance Company®, Capital Advantage Assurance Company® and Keystone Health Plan® Central. Independent licensees of the Blue Cross BlueShield Association. Communications issued by Capital Blue Cross in its capacity as administrator of programs and provider relations for all companies.