Molina Clinical Policy
Electrostimulation and Electromagnetic Therapy for Wound Care
Policy No. 399

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This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment, and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a Member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

OVERVIEW

The integumentary system operates within its own natural electrical environment sometimes referred to as the “skin battery.” The endogenous electrical field is integral in wound healing as a cue for cellular migration, and for promoting angiogenesis, collagen synthesis, and the proliferation of fibroblasts (Rajendran et al. 2021). Risk factors for impaired wound healing disrupt the natural healing methods of the body and may result in chronic nonhealing wounds.

In an economic evaluation of Medicare costs conducted by Carter et al. (2023), estimated expenditures associated with chronic wounds have decreased, from $29.7 billion in 2014 to $22.5 billion in 2019, despite an increased number of Medicare beneficiaries over the five-year period. The decrease was associated with shifts in chronic wound care delivery from the hospital outpatient setting to the physician office. However, the prevalence of chronic wounds has increased, particularly among the disabled under age 65, with an overall prevalence of 16.4% in 2019 compared to 14.5% in 2014. Wound care and the accompanying complications comprise a sizable portion of healthcare expenditures and decrease quality of life for those affected, leading scientists to investigate if exogenous electrical sources can aid in wound repair. Electrostimulation and electromagnetic therapy are technologies exploring new modalities for wound healing. Both modalities are considered adjunct therapies and are not a substitute for standard wound care.

Standard wound care includes optimization of nutritional status, debridement, appropriate dressings to maintain a clean, moist wound environment to promote healing, and necessary treatment to prevent or resolve any infection that may occur. Wound care includes relieving or offloading pressure to prevent further breakdown, position changes at least every two hours for patients with pressure ulcers, maintaining tight glycemic control for diabetic patients, optimizing perfusion for arterial ulcers, and use of a compression system for patients with venous ulcers (CMS 2004).

Electrostimulation (ES) is the application of electrical current through electrodes placed directly to the wound or peri wound area. There are varied parameters for applying electrical current including direct current, high voltage pulsed current (HVPC), alternating current, and transcutaneous electrical nerve stimulation (TENS). The frequency, polarity, pulse type, amplitude, and duration of treatment may vary as well (HQO 2017; Rajendran et al. 2021).

Electromagnetic therapy (EMT), including continuous and pulsed electromagnetic field (PEMF) therapy, is the application of electromagnetic fields around the wound, rather than direct electrical current (Aziz & Cullum 2015).

Regulatory Status

The Food and Drug Administration (FDA) has not cleared or approved any ES or EMT devices specifically for the treatment of chronic wounds. While there are numerous ES and EMT devices FDA-cleared for pain or other indications, the use of these devices for treating wounds is considered off-label.

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COVERAGE POLICY

Electrostimulation Therapy

Electrostimulation therapy for wound care may be **considered medically necessary** for up to 30 consecutive days when ALL the following criteria are met (initial treatment):

1. Diagnosis of ONE of the following:
   a. Arterial ulcer
   b. Chronic Stage III or Stage IV pressure injury
   c. Diabetic ulcer
   d. Venous stasis ulcer

2. Standard wound care* has been administered under the supervision of a healthcare professional for 30 consecutive days without documented Measurable signs of healing*

3. Electrostimulation therapy is performed under direct supervision of a healthcare professional in an inpatient, outpatient, or office setting

*Reference Supplemental Information section for further information on standard wound care and measurable signs of healing

Continuation of Therapy

Electrostimulation therapy for wound care may be **considered medically necessary** for longer than 30 consecutive days when ALL the following criteria are met:

1. Treating physician documents Measurable signs of healing* at least once per month

2. Electrostimulation therapy is performed under direct supervision of a healthcare professional in an inpatient, outpatient, or office setting

*Reference Supplemental Information section for further information on standard wound care and measurable signs of healing

Discontinuation of Therapy

Electrostimulation therapy must be discontinued when the wound demonstrates a 100% epithelialized wound bed OR the wound displays no measurable signs of healing after 30 consecutive days of appropriate electrostimulation therapy

Electromagnetic Therapy

Electromagnetic therapy for wound care performed in any setting is considered **experimental, investigational, and unproven,** including venous stasis ulcers, arterial ulcers, diabetic foot ulcers, chronic pressure injuries and soft tissue injuries, due to insufficient evidence in the peer-reviewed medical literature to establish long-term safety, efficacy, and effect on net health outcomes

DOCUMENTATION REQUIREMENTS: Molina Healthcare reserves the right to require that additional documentation be made available as part of its coverage determination; quality improvement; and fraud; waste and abuse prevention processes. Documentation required may include, but is not limited to, patient records, test results and credentials of the provider ordering or performing a drug or service. Molina Healthcare may deny reimbursement or take additional appropriate action if the documentation provided does not support the initial determination that the drugs or services were medically necessary, not investigational, or experimental, and otherwise within the scope of benefits afforded to the member, and/or the documentation demonstrates a pattern of billing or other practice that is inappropriate or excessive.

SUMMARY OF MEDICAL EVIDENCE

Electrostimulation (ES)

While evidence does not reveal definitive optimal treatment parameters for applying ES therapy, it does reveal that ES can be an effective adjunct therapy to standard wound care in accelerating the healing of chronic hard to heal wounds. The evidence is inconclusive for ES used in the treatment of wounds other than chronic non-healing wounds.

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Randomized Controlled Trials

Avendano-Coy et al. (2022) conducted a double-blind randomized controlled trial (RCT) to evaluate the effectiveness of microcurrent therapy for treating pressure injuries. Participants were volunteers from several nursing homes above the age of 65 with pressure injuries, only 30 of which passed inclusion criteria. The 30 participants were split randomly into two groups: the experimental group received ES therapy with standard wound care, and the placebo group received sham therapy with standard wound care. The study evaluated the wounds via the Pressure Ulcer Scale for Healing (PUSH) and the surface, depth, grade, and number of ulcers that healed completely. The wounds were evaluated three times, once pre-intervention, again 14 days after intervention start, and last 1 day after intervention completion. The intervention period lasted 25 days with ES participants receiving 10h of microcurrent therapy, and the placebo group receiving 10h of sham stimulation. At 14 days, the PUSH improvement was 16.8% higher in ES participants versus placebo. At 1 day post intervention, the PUSH improvement was 25.3% greater for ES versus placebo, and a 28.6% greater wound area reduction was exhibited for ES versus placebo. The limitations of this study are small sample size, risk of selection bias, short follow up duration, and varying underlying disease processes between the two groups as 53% of the experimental group had diabetes compared to 13% of the sham group.

Polak et al. (2018) conducted a double-blind RCT to study the effect of anodal versus cathodal electrical stimulation on peri wound skin blood flow and pressure injury size reduction in persons with neurological injury. Sixty-one participants met inclusion criteria from a single inpatient rehabilitation unit. Participants were randomly placed into three groups: anodal, cathodal, or placebo group ES. All groups received standard wound care in addition to their respective therapy for 50 minutes a day, five days per week, for eight weeks maximum. Peri wound blood flow was measured via Doppler at baseline, week 2, and week 4. Wound surface area was obtained and analyzed using a digitizer connected to a personal computer at baseline and week 8. Pressure injuries were in a baseline size range of 1.01 cm^2 to 59.57 cm^2 and a duration of 4 to 48 weeks, 73.77% of which were in the sacral region. At week 2, peri wound blood flow was significantly higher in the anodal and cathodal than in the placebo ($P < .05$), while at week 4 and 8, the findings were positively correlated but not more statistically significant than the placebo group. Wound surface area reduction was statistically significant for both the anodal (64.10% ± 29.22%) and cathodal (74.06% ± 23.23%) in comparison to the placebo group (41.42% ± 27.88%; $P = .0391$ and $P = .0024$, respectively). The results showed both modes of ES increased peri wound blood flow and decreased wound size; however, the limitations of this study were the small sample size, risk of selection and attrition bias, and the study duration was insufficient for all the pressure injuries to close.

Systematic Reviews and Meta-Analysis

Smith et al. (2025) conducted a systematic review, meta-analysis, and cost effectiveness analysis of ES therapy with standard care versus standard care alone for the treatment of chronic wounds. The review included 13 RCTs for a total of 783 participants with either diabetic foot ulcers, venous leg ulcers, or pressure ulcers. Median follow-up duration was 12 weeks, ranging from 3.5 to 52. For wound healing outcomes, 48.9% of ES treated wounds were completely healed during the study period compared to 26.9% treated with sham ES or standard care alone. ES therapy also significantly increased the odds of wound healing (odds ratio [OR] 2.46, 95% confidence interval [CI] 1.75-3.46, $p < 0.0001$). In the sensitivity analysis limited to studies lasting 8-16 weeks, the effect remained statistically significant (OR 2.30, 95% CI 1.44-3.69, $p = 0.0005$). Additionally, among subgroup analysis for wound type, results were significant for pressure ulcers (OR 2.75, 95% CI 1.78-4.25) and diabetic foot ulcers (OR 3.31, 95% CI 1.33-8.26), but not for venous leg ulcers (OR 1.56, 95% CI 0.78-3.12, $p = 0.21$). Among the 5 RCTs that reported on time to healing, the pooled mean was 8.26 weeks for ES treated wounds versus 10.93 weeks for standard care alone. For cost analysis, pooled results were applied to a hypothetical cohort of 100 patients treated for 12 weeks with a single-use ES device with a cost of GBP 240 and estimated weekly costs of wound care adjusted to 2024 inflation levels. ES plus standard care was estimated to prevent 385 nursing visits, save approximately 116 hours of nursing time, and reduce treatment time by 154 total wound-care weeks for the cohort. Total estimated costs for ES plus standard care were GBP 434,599 versus GBP 472,825 for standard care alone, yielding savings of GBP 382 per patient. However, this analysis may not apply to cheaper or more expensive devices, patients requiring additional clinical visits, or healthcare systems outside the United Kingdom. The study was funded by the manufacturer of the same device used to estimate ES therapy costs. Other study limitations include limited participant and caregiver blinding, small sample sizes, variability in ES treatment modality, duration, wound type, and patient characteristics, and the use of a single reviewer for study selection, data extraction, and risk of bias assessment.

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Zhong et al. (2025) conducted a systematic review and network meta-analysis to evaluate the comparative safety and efficacy of ES modalities, including direct, pulsed, and alternating current for diabetic ulcers. The review included 11 RCTs, for a total of 478 participants, most of whom had diabetic foot ulcers. Treatment durations ranged from 4 to 12 weeks, and ES was provided in addition to conventional wound care, including cleaning, dressing, debridement, antibiotics, and off-loading. Depending on the study, ES was compared with sham stimulation, local heat, or no additional treatment. Primary outcomes were ulcer healing rates and the number of healed ulcers, measured by surface area measurements, clinical wound assessment, percentage reduction in wound area, or complete wound closure. High-voltage pulsed current (HVPC) produced the largest improvement in ulcer healing rate, with a treatment effect of 24.83 (95% CI, 4.5-45.60) compared to control, followed by asymmetric biphasic square wave stimulation at 18.56 (95% CI, 7.31- 37.17), and symmetric biphasic square-wave stimulation at 17.01 (95% CI, 3.65-30.38). Additionally, symmetric biphasic square-wave stimulation had the highest probability of producing a greater number of completely healed ulcers, while asymmetric biphasic square-wave stimulation had the most consistent performance across both healing outcomes. Very low-level ES current generally ranked the lowest for efficacy, while control treatment also ranked poorly in healing outcomes. However, control treatment had the most favorable safety ranking following by very low-level ES current. Adverse events included skin irritation, discomfort, and muscle contractions. The authors concluded that HVPC, cathodal direct current, and asymmetric biphasic square-wave stimulation are the most effective ES modalities for promoting diabetic ulcer healing.

Lan et al. (2024) conducted a systematic review and meta-analysis to assess the effectiveness of ES in treating diabetic ulcers when used as an adjunct to standard wound care. The analysis included ten randomized controlled trials encompassing a total of 451 patients, comparing outcomes between those who received ES-supported therapy and those treated with conventional methods or placebo. The findings demonstrated statistically significant improvements in both healing rate and ulcer closure with ES. Specifically, the mean difference in healing rate was 20.37 (95% CI: 16.89–23.85; $p < 0.001$), and ES was associated with a higher likelihood of complete ulcer healing, as demonstrated by a pooled risk ratio of 1.45 (95% CI: 1.18–1.78; $p < 0.001$), indicating a meaningful improvement over conventional care. Mechanistically, ES enhanced vascular perfusion, modulated inflammatory cytokines such as IL-1, TNF-α, and IL-6, and promoted fibroblast, keratinocyte, and epithelial cell activity, contributing to accelerated tissue repair. The therapy also demonstrated antimicrobial benefits and potential analgesic effects. Devices employed various current types, including low-frequency alternating current and high-voltage or low-intensity direct current modalities. While the results confirm ES as a promising adjunctive modality for diabetic wound management, the authors emphasize the need for standardized application protocols and larger, high-quality trials to refine clinical usage.

Borges et al. (2023) conducted a systematic review of the effect of ES in healing venous leg ulcers. The review included eight RCTs and three case series for 724 limbs with venous leg ulcers in 716 patients. The mean age was 64.2 years and 46.2% were men. The RCTs placed the electrodes in one of three positions: active electrode was placed on the wound with the passive electrode placed on healthy skin (n = 6), the two electrodes were placed on either side of the wound edges (n = 4), or a planar probe was used (n=1) with pulsed current being the most utilized method of current delivery. Change in ulcer size, ulcer healing rate, exudate levels, and/or healing time were the measurements used to determine outcome. Five of the RCTs detected a statistically significant improvement in at least one venous leg ulcer healing measurement after ES. Two RCTs found ES improved wound healing only in patients who had not undergone surgical treatment for venous leg ulcers.

Rajendran et al. (2021) conducted a systematic review on ES to enhance wound healing. The review included 30 full text articles and was conducted in two parts. Part one focused on the impact of ES on the process of normal wound healing and included in vitro studies and studies conducted on human skin. Part two reviewed the effects of ES on chronic wound healing and included in vivo RCTs on human participants.

Part one: Six in vitro studies reviewed in part one exhibited bacteriostatic effects when common bacterial strains from chronic wounds were subjected to ES. The bacteriostatic effects were dependent on the amount and method of ES deliverance. There is a lack of in vivo studies to investigate the antibacterial effects of ES on chronic wounds, but the in vitro evidence is promising. Four RCTs and one case series revealed ES has positive effects on tissue perfusion. Two RCTs revealed a histological increase in vascular endothelial growth factor, endothelial cells, blood flow, and an upregulation on anti-inflammatory genes in biopsy wound samples (two samples taken per participant, therefore the participants were their own controls) exposed to ES.

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Part two: Twelve RCTs with a total of 532 participants were analyzed for effects of ES on chronic wound healing. All studies randomized participants to receive ES or sham treatment in combination with standard wound care. All studies reported a degree of accelerated wound healing in those with ES therapy compared to sham treatment. The limitation of this review was that all the studies utilized different types and currents of ES therapy, as well as varied durations and outcome measurements.

Non-randomized Studies, Retrospective Reviews and Other Evidence

Haesler (2024), writing on behalf of the Wound Healing and Management (WHAM) Collaborative, published an evidence summary evaluating the effectiveness of ES therapy for wound healing, drawing from Level 1 evidence across systematic reviews and meta-analyses of randomized controlled trials spanning 2013 to 2023. The summary concluded that ES, when used as an adjunct to standard care, offers moderate clinical benefit for hard-to-heal wounds, including pressure injuries, diabetic foot ulcers, and venous leg ulcers. Pooled analysis of studies targeting pressure injuries suggested that ES nearly doubles the likelihood of complete healing within 12 weeks (RR = 1.99; 95% CI: 1.39–2.85). In diabetic foot ulcers, ES was associated with a significant reduction in wound surface area (SMD = 2.56; 95% CI: 1.43–3.69), although data on complete closure were less consistently reported. Across mixed wound types evaluated in 29 RCTs, ES demonstrated a moderate pooled effect (SMD = 0.72; 95% CI: 0.48–1.0), with more favorable results observed in studies assessed as low risk of bias. The therapy is thought to support healing through improved circulation, reduced edema, stimulation of cellular activity, and modulation of inflammatory responses. Devices used included high-voltage monophasic pulsed current, low-voltage biphasic pulsed current, direct current, and microcurrent therapy, with some administered continuously via electroceutical dressings. Haesler recommends that ES be delivered by appropriately trained wound care clinicians and positioned as an adjunct to best practice standards rather than a replacement. The author also emphasizes the need for standardized treatment protocols and further high-quality clinical trials to refine application parameters and support broader clinical adoption.

Electromagnetic Therapy (EMT)

For EMT, the available evidence is insufficient to support conclusions regarding the efficacy of this technology for the treatment of chronic wounds and soft tissue injuries. The available studies are limited by small sample sizes and significant methodological flaws between intervention and control groups. Systematic reviews of multiple RCTs highlight the overall evidence as low-quality and that conclusions should be interpreted with caution due to high heterogeneity and risk of bias. The available evidence is insufficient to support safety, efficacy, define optimal treatment protocols, establish patient selection criteria, or to evaluate the relative efficacy of this therapy compared with other treatment options.

Randomized Controlled Trials

Eltayeb et al. (2025) conducted a single-blinded RCT to evaluate pulsed EMT as an adjunct to conventional treatment versus conventional treatment alone for stage 2 or 3 chronic Charcot foot ulceration. Thirty-four participants were randomized equally into the EMT group or the control group. Conventional treatment for both groups included transcutaneous electrical nerve stimulation, medical treatment, debridement, dressing changes, off-loading, and infection control 3 times weekly for 12 weeks. The intervention group additionally received pulsed EMT at 20 Hz and 50 gauss for 120 minutes per session, with localized cooling and controlled pressure. Outcomes were assessed at baseline, 6 weeks, and 12 weeks using plain radiograph for Charcot-related fractures, fragmentation, sclerosis, consolidation, and other structural abnormalities, and wound surface area. At 6 weeks, median wound surface area was 8.5 cm^2 in the EMT group versus 11.5 cm^2 in the control group ($p = 0.03$), compared to 23.5 $\pm$ 4.12 cm^2 and 21.8 $\pm$ 5.8 cm^2 at baseline ($p = 0.3$), respectively. At 12 weeks, median wound surface area was 0.0 cm^2 in the EMT group versus 6.6 cm^2 in the control group ($p < 0.01$). Additionally, at 12 weeks, 94.1% of EMT participants had complete radiographic resolution of Charcot signs, compared with 5.9% in the control group ($p < 0.001$). Treatment adherence was 100%, with no dropouts and no participants missing more than 10% of sessions. Study limitations include a small single-center sample, single-blinded design, limited follow-up duration, only one pulsed EMT regimen, and the restriction to a selected population without ischemic or other healing-impaired conditions. The authors concluded that pulsed EMT is an effective, noninvasive adjunct for Charcot neuropathy with ulceration, providing greater radiographic bone recovery and faster wound-area reduction than conventional treatment alone.

Mohamady et al. (2023) conducted an RCT to evaluate the efficacy of combined pulsed EMT therapy and plantar flexion resistance exercise (PRE) in patients with venous ulcers. Sixty patients with grade two venous ulcers, aged between 40 and 55, were enrolled in the study. Inclusion criteria necessitated primary venous ulcers in the context of venous insufficiency, while exclusion criteria encompassed peripheral vascular disease, arterial disease, ulcers with

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infection, cellulitis symptoms, or necrotic tissue. The patients were allocated into three groups: the EMT+PRE group received both pulsed electromagnetic field therapy and plantar flexion resistance exercise, the EMT group received only pulsed electromagnetic field therapy, and the control group received conservative treatment. EMT was administered using the Magnetic Biostimulation Device MBS-system in both experimental groups. Outcomes were assessed at baseline, four weeks, and twelve weeks, with the primary outcome being ulcer surface area and the secondary outcome being ulcer volume. At the four-week follow-up, no significant differences were observed between the experimental groups and the control group ($p > 0.05$). However, at the twelve-week follow-up, significant variations in ulcer surface area and volume were noted across all three groups compared to baseline ($p < 0.05$). The EMT+PRE group demonstrated the most substantial improvements, with mean differences in ulcer surface area and volume of -4.75 and -12.63, respectively, compared to the control group's -0.98 and -2.45. The study's limitations include the absence of long-term follow-up, hindering analysis of the long-term effects of EMT and PRE. Additionally, the small sample size limits the generalizability of the findings. The study also did not employ the most precise methods for assessing ulcer size and area, such as digital planimetry or jeltrate volume measurement. Nevertheless, the findings suggest that combined pulsed EMT and PRE offer significant benefits for patients with venous ulcers compared to conservative treatments alone.

Systematic Reviews and Meta-Analysis

Chia et al. (2026) conducted a systematic review to evaluate the effects of pulsed EMT on pain and physical function in patients with soft tissue injuries. The review included 4 RCTs, for a total of 243 participants. Three of the RCTs compared adjunct pulsed EMT to another conservative treatment, while one RCT compared isolated pulsed EMT to placebo stimulation. Because of significant heterogeneity and lack of data, a meta-analysis was not performed. For pain, measured with VAS or NRS, 3 out of 4 studies reported statistically significant reductions in pain in the intervention groups compared to control groups ($p < 0.05$). However, one study found no significant difference between adjunct pulsed EMT versus sham. For physical function, assessed using the Foot Function Index, Role-Maudsley score, or the Victorian Institute of Sports Assessment questionnaire, only 1 of 3 studies demonstrated a statistically significant improvement in physical function following pulsed EMT ($p < 0.05$). Three studies reported no adverse effects while one study reported temporary skin redness, and no serious adverse events were reported. The authors concluded that high intensity, low frequency pulsed EMT may offer additional pain relief for musculoskeletal soft-tissue injuries, but evidence for improvement in physical function remains uncertain. The overall evidence is low-quality and should be interpreted with caution due to high heterogeneity and risk of bias.

Wang et al. (2024) conducted an overview of systematic reviews to assess the effectiveness of EMT for treating venous leg ulcers, synthesizing data from five eligible reviews published before January 2024. While several reviews indicated that EMT may promote healing by enhancing microcirculation and tissue oxygenation, the overall evidence was inconclusive due to small sample sizes, variability in study design, and inconsistent treatment protocols. Methodological quality across the reviews was rated as moderate, with generally low risk of bias in several domains. Certainty of evidence was downgraded to moderate based on GRADE criteria due to imprecision and heterogeneity. The authors recommend future research emphasize protocol standardization, larger cohorts to strengthen statistical power, and longer follow-up durations to assess durability of treatment outcomes and potential delayed adverse effects. Although EMT remains a promising non-invasive adjunct for venous leg ulcers, stronger clinical evidence is needed to support definitive therapeutic recommendations.

National and Specialty Organizations

The **Wound, Ostomy, and Continence Nurses Society (WOCN)** 2024 guideline for the management of wounds in patients with lower extremity arterial disease recommends electrotherapy/electrostimulation as an adjunctive treatment to increase perfusion and walking capacity and decrease pain in patients with lower extremity arterial disease (LEAD), particularly those with intermittent claudication and comorbid diabetes mellitus. The recommendation is based on Level B evidence, indicating moderate support from well-designed studies. The intervention was graded as Class III (benefit/effectiveness/harm), meaning it may be considered when standard care is insufficient, although the overall quality of evidence was rated as low due to limitations in available data. WOCN advises clinicians to individualize treatment decisions based on patient presentation and response to care (Bonham et al. 2024).

The **International Working Group on the Diabetic Foot (IWGDF)** published its 2023 Wound Healing Guideline, which evaluated physical therapy modalities, including EST and EMT, for the treatment of diabetic foot ulcers. The group reviewed several small studies assessing these interventions but found that evidence was limited and of low

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quality, with no statistically significant improvement in wound healing compared to standard care. As a result, EST and EMT are not recommended as part of routine wound management in patients with diabetes-related foot ulcers. This recommendation was graded as strong, despite low certainty, reflecting the guideline's position that physical therapy interventions should not be used unless further high-quality evidence becomes available (Chen et al. 2024).

The **American College of Physicians (ACP)** developed a guideline to present the evidence and provide clinical recommendations based on the comparative effectiveness of treatments of pressure ulcers. Based on the evidence, the ACP recommends that clinicians use ES as an adjunctive therapy to accelerate wound healing in patients with pressure ulcers. This is a weak recommendation based on moderate-quality evidence. For other adjunctive therapies, including EMT, the ACP reported that low-quality evidence showed no difference or mixed findings; however, the ACP did not issue a recommendation for EMT (Qaseem et al. 2015).

The **National Institute for Health and Care Excellence (NICE)** published clinical guideline CG179 on the prevention and management of pressure ulcers. While newer evidence suggests that there may be a benefit of ES in reducing ulcer area and improving wound healing time, the guidelines do not recommend ES for treating pressure ulcers in adults (NICE 2018).

The **Wound Healing Society (WHS)** published a 2023 update on guidelines for the treatment of pressure ulcers. The guideline states that ES, when used in conjunction with convention therapy, may be useful in the treatment of chronic Stage II through Stage IV pressure ulcers. This is based on Level I evidence, including systematic reviews and meta-analyses of multiple RCTs. The WHS highlights current evidence that high voltage monophasic pulsed current is effective in the treatment of chronic pressure ulcers by reducing the wound area and by enhancing the likelihood of achieving complete wound healing (Gould et al. 2024).

SUPPLEMENTAL INFORMATION

Standard wound care includes:

1. Optimization of nutritional status
2. Maintenance of a clean moist wound bed with appropriate moist dressings
3. Necessary treatment to resolve any infection present
4. Debridement of devitalized tissue
5. Appropriate pressure offloading of wound
6. Wound care for specific wounds:
    a. For arterial ulcers: assessment of individual's vascular status and correction of any amenable vascular problems to establish adequate perfusion
    b. For venous ulcers: compression dressing/garments consistently applied
    c. For pressure injuries: frequent repositioning at least every two hours
    d. For diabetic ulcers: Improved glycemic control as exhibited by efforts shown to maintain blood glucose levels below 200mg/dL and/or a glycosylated hemoglobin level (HbA1c) of 9% or less within the last 90 days

Measurable signs of healing

1. Decrease in wound size, surface area or volume
2. Decrease in exudate amount
3. Decrease in necrotic tissue amount

Pressure Injury Staging:

1. Stage I: Non-Blanchable Erythema. The skin is intact and visibly red but does not "blanch" (turn white) when pressed.
2. Stage II: Partial-Thickness Skin Loss. The epidermis and part of the dermis are damaged. The wound may present as a shallow, open wound or a blister. The wound bed is pink or red, but there is no dead tissue.
3. Stage III Pressure Injury: Full thickness injury. Adipose tissue exposed with granular tissue and rolled wound edges often present. Slough and/or eschar may be present.
4. Stage IV Pressure Injury: Full thickness injury and tissue loss. Bone, cartilage, fascia, ligament, muscles, and/or tendon exposed. Rolled wound edges and tunneling are often present. Slough and/or eschar may be present.

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CODING & BILLING INFORMATION

HCPCS (Healthcare Common Procedure Coding System)

Code	Description
G0281	Electrical stimulation, (unattended), to one or more areas, for chronic Stage III and Stage IV pressure ulcers, arterial ulcers, diabetic ulcers, and venous stasis ulcers not demonstrating measurable signs of healing after 30 days of conventional care, as part of a therapy plan of care
G0282	Electrical stimulation, (unattended), to one or more areas, for wound care other than described in G0281
G0295	Electromagnetic therapy, to one or more areas, for wound care other than described in G0329 or for other uses
G0329	Electromagnetic therapy, to one or more areas for chronic Stage III and Stage IV pressure ulcers, arterial ulcers, diabetic ulcers and venous stasis ulcers not demonstrating measurable signs of healing after 30 days of conventional care as part of a therapy plan of care
E0761	Nonthermal pulsed high frequency radiowaves, high peak power electromagnetic energy treatment device
E0769	Electrical stimulation or electromagnetic wound treatment device, not otherwise classified

CODING DISCLAIMER: Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

APPROVAL HISTORY

08/12/2026	Policy reviewed. No changes to coverage criteria.
08/13/2025	Policy reviewed. No changes to coverage criteria.
08/14/2024	Policy reviewed. No changes to coverage criteria.
08/09/2023	Policy revised. Changes to coverage criteria. IRO Peer Review on June 30, 2023, by a practicing physician board-certified in General Surgery (Wound Care).
08/10/2022	Policy reviewed. No changes to coverage position.
08/11/2021	New policy. IRO Peer Review on February 24, 2021, by a practicing physician board-certified in General Surgery (Wound Care).

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