

MEDICAL POLICY STATEMENT **Arkansas PASSE**

Policy Name & Number

Negative Pressure Wound Therapy-AR PASSE-MM-1144

Date Effective 01/01/2025

Policy Type

MEDICAL

Medical Policy Statement prepared by CareSource and its affiliates are derived from literature based on and supported by clinical guidelines, nationally recognized utilization and technology assessment guidelines, other medical management industry standards, and published MCO clinical policy guidelines. Medically necessary services include, but are not limited to, those health care services or supplies that are proper and necessary for the diagnosis or treatment of disease, illness, or injury and without which the patient can be expected to suffer prolonged, increased or new morbidity, impairment of function, dysfunction of a body organ or part, or significant pain and discomfort. These services meet the standards of good medical practice in the local area, are the lowest cost alternative, and are not provided mainly for the convenience of the member or provider. Medically necessary services also include those services defined in any Evidence of Coverage documents, Medical Policy Statements, Provider Manuals, Member Handbooks, and/or other policies and procedures.

Medical Policy Statements prepared by CareSource and its affiliates do not ensure an authorization or payment of services. Please refer to the plan contract (often referred to as the Evidence of Coverage) for the service(s) referenced in the Medical Policy Statement. If there is a conflict between the Medical Policy Statement and the plan contract (i.e., Evidence of Coverage), then the plan contract (i.e., Evidence of Coverage) will be the controlling document used to make the determination. According to the rules of Mental Health Parity Addiction Equity Act (MHPAEA), coverage for the diagnosis and treatment of a behavioral health disorder will not be subject to any limitations that are less favorable than the limitations that apply to medical conditions as covered under this policy.

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A. Subject Negative Pressure Wound Therapy

B. Background

Negative Pressure Wound Therapy (NPWT), also known as vacuum-assisted wound closure, is a type of wound therapy that is used to treat chronic wounds, such as ulcers related to pressure sores, venous or arterial insufficiency, or neuropathy. There are many causes for pressure ulcers, such as diabetes, vascular insufficiencies, or an underlying medical condition.

NPWT involves the controlled application of subatmospehric pressure to the surface of a wound. This type of therapy utilizes an electrical pump, connected to a specialized dressing that then removes debris and exudate from the wound and drains into a collection canister. NPWT is a noninvasive type of therapy that has been shown to be effective in accelerating wound healing for chronic wounds.

To provide a more conducive environment for wound healing, the NPWT method utilizes a semipermeable dressing that always remains moist and warm. This therapy can be done in the home or in an outpatient treatment facility. NPWT typically does not require in-patient monitoring.

- C. Definitions
 - Arterial Insufficiency Ulcer A type of ulcer that develops due to the lack of delivery of oxygen-rich blood to tissue which causes the tissue to begin to deteriorate and develop into an open wound.
 - **Deep Tissue Pressure Injury** A type of injury resulting from a serious pressure ulcer that has advanced with additional necrosis of underlying soft tissue that may or may not be visible.
 - **Dehisced Wounds** A wound that has ruptured along the wound margin typically due to infection.
 - Eschar Black or brown, thick, leathery feeling dead tissue covering an ulcer.
 - **Measurable improvement** Measurable changes in wound healing, including drainage, inflammation, swelling, pain and/or tenderness, wound dimensions, surface measurements, granulation tissue, necrotic tissue/slough, tunneling, or undermining.
 - **Neuropathic Ulcer** A type of ulcer that occurs due to lack of sensation secondary to neuropathy which causes skin and underlying tissue to begin to breakdown causing ulcers further complicated by infection.
 - Pressure Ulcer A type of ulcer that develops due to an extended amount of time when there is compression of the soft tissue overlying bony prominences and an outside object causing tissue necrosis.
 - Slough Avascular (dead) soft tissue found in higher stage ulcers.
 - **Tunneling** Channels of tissue deterioration that extend from the wound to the subcutaneous tissue typically in one direction.



- **Undermining** Subcutaneous tissue deterioration around the margin of a wound and may occur in any direction.
- Venous Insufficiency Ulcer A type of ulcer that occurs due to lack of properly functioning venous valves, which causes the veins to increase in size.

Staging Pressure Ulcers				
Stage 1	A localized area of skin that is intact with non-blanchable erythema. Changes in sensation, temperature, or firmness of the skin may be present prior to visual alterations of the skin. If discoloration is purple or maroon, this may be indicate a deep tissue injury.			
Stage 2	A surface area of skin that has partial-thickness loss of skin with exposed dermis. May initially present as a serum-filled blister that has ruptured. The wound bed will be moist, red/pink, and the skin should be viable. There should be no evidence of visible adipose (fatty) tissue, eschar, slough, or granulation.			
Stage 3	A surface area of skin that has full-thickness loss of skin with visible adipose (fat) tissue and granulation. The wound edges are often rolled (epibole), and there may be visible eschar and slough. Undermining and tunneling may occur in the wound. At this stage, there should be no fascia, muscle, tendon ligament, cartilage, and/or bones exposed.			
Stage 4	A surface area of skin that has full-thickness loss of skin. At this stage, there will be fascia, muscle, tendon, ligament, cartilage, or bone that is visible or directly palpable. The wound edges will be rolled (epibole), and there is typically visible eschar and slough. Undermining and tunneling occur often in the wound.			
Unstageable	Inability to fully assess the extent of the tissue damage due to eschar or slough obscuring visibility, but there is observable full-thickness skin and tissue loss that is unstageable.			

D. Policy

CareSource considers NPWT medically necessary when **ANY** of the following clinical criteria are met:

- A. Stage III or IV pressure ulcer (see staging criteria above) in individuals who meet ALL of the following:
 - 1. Member has been on an every 2-hour turning and repositioning regimen.
 - Pressure relief techniques and/or pressure-reducing surfaces have been ordered (eg, foam overlay mattress, egg crate foam mattress or low-air-loss devices) and documented ongoing compliance is in the member's medical record.
 - 3. Member's incontinence and moisture issues have been appropriately managed.
- B. Chronic neuropathic ulcer that meets BOTH of the following criteria:
 - 1. A comprehensive diabetic management program has been implemented, including A1C management, medication management, and ongoing diabetic education.



- 2. Foot care has been done by a medical professional to include general inspection, nail care, reduction in pressure on foot ulcer, and monofilament testing.
- C. Ulcers related to venous or arterial insufficiencies, that meet the following criteria:
 - 1. Compression garments/dressing/bandages are being applied consistently per physician orders in documented venous insufficiency plan of care for at least 30 days.
 - 2. Ambulation and leg elevation have been ordered and documented ongoing compliance is in the member medical record.
- D. Member has any of the following:
 - 1. high-risk open fracture
 - 2. dehisced wound post sternotomy wound complication or infection (mediastinitis).
 - 3. surgically created wound with complications resulting in a need for accelerated granulation therapy that cannot be achieved by other treatment modalities, such as topical wound treatment
- E. open non-healing amputation site in diabetic
- F. delayed healing or non-healing of skin graft which is likely due to irregularly contoured or inadequate blood flood from the graft bed
- II. CareSource members may be eligible for the continuation of NPWT treatment when documentation by a licensed medical professional includes **ALL** of the following criteria:
 - A. A licensed medical professional has directly performed the dressing change and is monitoring and controlling the member's underlying medical conditions.
 - B. The wound has progressive and measurable improvement.
 - 1. If no measurable degree of improvement in wound healing has occurred from month to month, the approval for the NPWT will be discontinued.
 - 2. An exception to measurable improvement is when a wound has been debrided within the last approval period. Documentation of debridement must accompany the request for continuation of NPWT. Before and after images are preferred.
 - C. If abnormal, provisions have been made to the member's nutritional status.
- III. CareSource does not consider NPWT medically necessary for non-healing wounds or ulcers under any of the following conditions:
 - A. exposed nerves, blood vessels, or organs in the vicinity of the wound
 - B. uncontrolled soft tissue infection or osteomyelitis
 - C. malignancy present in the wound
 - D. necrotic tissue present in the wound with eschar and has not been debrided
 - E. open fistula present to an organ or body cavity within the vicinity of the wound
 - F. active bleeding
- IV. When applied during surgery, CareSource does not reimburse separately for NPWT. NPWT is covered under the surgery code.



- V. The coverage provided for NPWT by the global surgical package is not intended to deny billing for NPWT in outpatient services. When a patient is discharged from the hospital with wounds that are still in need of NPWT treatment, outpatient wound care is covered when it meets medical necessity.
- VI. Initial approval for NPWT in the outpatient setting will be for a month. After the initial month, continued approval will be based on the medical necessity guidelines in this policy. Continued approval will be made in 1-month increments. CareSource will approve the following allowances for supplies:
 - A. Fifteen dressing kits per wound per month. Additional dressing kits may be requested with documentation that the wound size requires more than one kit.
 - B. Ten canister sets per month. Additional canister sets can be requested if there is documentation showing greater than 90 ml drainage exudate per day.
 - C. Initial approval includes NPWT equipment and supplies that are used upon discharge from an in-patient setting.
- E. Conditions of Coverage N/A
- F. Related Polices/Rules N/A

	DATE	ACTION		
Date Issued	05/31/2018	New Policy		
Date Revised	02/02/2022	Updated Background, updated Sec II E		
	11/30/2022	Updated references.		
	10/11/2023	Annual review. Updated references and clarified coverage		
		criteria in D. IV-VI. Approved at committee.		
	10/23/2024	Annual review: updated references. Approved at		
		Committee.		
Date Effective	01/01/2025			
Date Archived				

G. Review/Revision History

H. References

- 1. Biancari F, Santoro G, Provenzano F, et al. Negative-pressure wound therapy for prevention of sternal wound infection after adult cardiac surgery: systematic review and meta-analysis. *J Clin Med*. 2022;11(15):4268. doi:10.3390/jcm11154268
- 2. Chen L, Zhang S, Da J, et al. A systematic review and meta-analysis of efficacy and safety of negative pressure wound therapy in the treatment of diabetic foot ulcer. *Ann Palliat Med.* 2021;10(10):10830-10839. doi:10.21037/apm-21-2476
- De Pellegrin L, Feltri P, Filardo G, et al. Effects of negative pressure wound therapy with instillation and dwell time (NPWTi-d) versus NPWT or standard of care in orthoplastic surgery: a systematic review and meta-analysis. *Int Wound J*. 2023;20(6):2402-2413. doi:10.1111/iwj.14072



- Gao J, Wang Y, Song J, et al. Negative pressure wound therapy for surgical site infections: a systematic review and meta-analysis. *J Adv Nurs*. 2021;77(10):3980-3990. doi:10.1111/jan.14876
- 5. Gestring M. Negative pressure wound therapy. UpToDate. Updated November 16, 2022. Accessed August 23, 2024. www.uptodate.com
- Groenen H, Jalalzadeh H, Buis DR, et al. Incisional negative pressure wound therapy for the prevention of surgical site infection: an up-to-date meta-analysis and trial sequential analysis. *EclinicalMedicine*. 2023;62:102105. doi:10.1016/j.eclinm.2023.102105
- Kim PJ, Attinger CE, Constantine T, et al. Negative pressure wound therapy with instillation: international consensus guidelines update. *Int Wound J.* 2020;17(1):174-186. doi:10.1111/iwj.13254
- Negative pressure wound therapy (vacuum-assisted wound closure): A-0346. MCG Health. 28th ed. Updated March 14, 2024. Accessed August 23, 2024. www.careweb.careguidelines.com
- Norman G, Goh EL, Dumville JC, et al. Negative pressure wound therapy for surgical wounds healing by primary closure. *Cochrane Database Syst Rev.* 2022;6(6):CD009261. doi:10.1002/14651858.CD009261.pub7
- 10. Orlov A, Gefen A. The potential of a canister-based single-use negative-pressure wound therapy system delivering a greater and continuous absolute pressure level to facilitate better surgical wound care. *Int Wound J.* 2022;19(6):1471-1493. doi:10.1111/iwj.13744
- Pedrazzi NE, Naiken S, La Scala G. Negative pressure wound therapy in pediatric burn patients: a systematic review. *Adv Wound Care (New Rochelle)*. 2021;10(5):270-280. doi:10.1089/wound.2019.1089
- PICO single use negative pressure wound therapy system (Smith & Nephew) for cesarean birth wound care. Hayes; 2022. Reviewed July 10, 2024. Accessed August 23, 2024. www.evidence.hayesinc.com
- Poteet SJ, Schulz SA, Povoski SP, et al. Negative pressure wound therapy: device design, indications, and the evidence supporting its use. *Expert Rev Med Devices*. 2021;18(2):151-160. doi:10.1080/17434440.2021.1882301
- Prosthetics (Includes DME and Orthotics): Provider Manual Section II Program Policy. Arkansas Department of Human Services. Accessed October 9, 2024. humanservices.arkansas.gov
- 15. Revesz ES, Altorjay A, Montsko V, et al. Effectiveness of negative pressure wound therapy: minimum five-year follow-up and review of the literature. *Jt Dis Relat Surg.* 2022;33(1):51-56. doi:10.52312/jdrs.2022.547
- Shi J, Gao Y, Tian J, et al. Negative pressure wound therapy for treating pressure ulcers. *Cochrane Database Sys Rev.* 2023;5(5):CD011334. doi:10.1002/14651858.CD011334.pub3
- 17. Silverman RP. Negative pressure wound therapy with instillation and dwell time: mechanisms of action literature review. *Eplasty*. 2023;23:e54. www.ncbi.nlm.nih.gov
- 18. Tian Y, Li K, Zeng L. A systematic review with meta-analysis on prophylactic negative pressure wound therapy versus standard dressing for obese women after caesarean section. *Nurs Open*. 2023;10(9):5999-6013. doi:10.1002/nop2.1912



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19. Xie W, Dai L, Qi Y, et al. Negative pressure wound therapy compared with conventional wound dressings for closed incisions in orthopaedic trauma surgery: A meta-analysis. *Int Wound J.* 2022;19(6):1319-1328. doi:10.1111/iwj.13726

Independent medical review - 4/2020