



Subject: Vacuum-Assisted/Negative Pressure Wound Therapy*

Effective Date: July 31, 2007

Department: Utilization Management

Policy: Vacuum-assisted/Negative pressure wound therapy (NWPT) (CPT 97605, 97606; HCPCS A6550, E2402) is reimbursable under plans administered by QualCare, Inc. when eligible member benefit is in place and medical necessity exists.

Objective: To assure proper and consistent reimbursement for a medically necessary service, procedure or test and to delineate criteria that provide evidence of that medical necessity.

Procedure: Coverage is provided when **one of** the following chronic wound conditions is present:

- Pressure ulcers -**Stage III or Stage IV** where the staging is as follows:

StageI:

Non-blanchable erythema of intact light toned skin or a darker or violet hue in darkly pigmented skin.

StageII:

Partial thickness skin loss involving epidermis or dermis.

StageIII:

Full thickness skin loss involving damage or necrosis of

subcutaneous tissue that may extend down to, but not through, underlying fascia.

StageIV:

Full thickness skin loss with extensive destruction, tissue necrosis or damage to muscle, bone or support structures.

AND there is lack of improvement over at least 30 days of standard wound therapy including an appropriate pressure reduction program including repositioning and appropriate pressure relief surface, moisture and incontinence control and debridement as indicated.

- Venous or arterial insufficiency ulcers
- Dehisced wounds or wounds with exposed hardware or bone
- Neuropathic ulcers without improvement on appropriate local care and non-weight bearing(if appropriate) for at least 30 days
- Complications of a surgically created or traumatic wound where accelerated granulation therapy is necessary which cannot be achieved by other available topical wound treatment
- Post-sternotomy wound infection or mediastinitis
- Skin graft success is questionable and hospital admissions will be avoided
- Wounds with massive exudate/transudate where normal dressings fill up quickly and macerate the wound.

Continuation of Treatment: For coverage to continue beyond four weeks, the medical records (progress notes) should indicate the following:

Weekly assessment of the wound(s) dimensions and characteristics by a licensed healthcare professional

Documentation of progressive wound healing without intervening complications at least monthly.

(A7000) are **Supplies** -up to 15 dressing kits (A6550) and 10 canister sets covered per month as medical necessary unless there is documentation of a large volume of drainage (i.e., > 90 ml of exudate per day) or the wound size requires more than one dressing kit for each dressing change.

Vacuum-assisted wound closure is considered **not** medically necessary if any of the following conditions are present:

- 1) The wound is a Stage I or II pressure ulcer
- 2) Necrotic tissue with eschar is present in the wound and debridement is not attempted
- 3) Cancer is present in the wound
- 4) A fistula to an organ or body cavity is present within the vicinity of the wound
- 5) The skin surrounding the wound does not allow for an effective adhesive drape necessary to create negative pressure
- 6) The depth of the wound is less than 1 mm, as wounds of this depth cannot accommodate the sponge
- 7) A measurable degree of wound healing has failed to occur after use of the vacuum-assisted closure device for one month
- 8) Adequate wound healing has occurred to the degree that use of the vacuum-assisted closure device may be discontinued

Non-covered negative pressure wound therapy devices include disposable non-powered mechanical or single use non-electrically powered devices (CPT 97607,97698, HCPCS A9272). These are considered experimental, investigation or unproven due to lack of published evidence of safety and effectiveness.

References:

Liu S, He CZ, Cai YT, Xing QP, et al. Evaluation of negative-pressure wound therapy for patients with diabetic foot ulcers: systematic review and meta-analysis. *Ther Clin Risk Manag.* 2017;13:533-544(Apr)

Seternes A, Rekstad LC, Mo S, Klepstad P, et al. Open Abdomen Treated with Negative Pressure Wound Therapy: Indications, Management and Survival. *World J Surg.* 2017;41(1):152-161(Jan)

Hayes Inc. Medical Technology Directory-Negative Pressure Wound therapy for Chronic Wounds: Home Use. Published December 15, 2015, annual review December 19, 2017. Accessed at Hayesinc.com

Siqueira MB, Ramanathan D, Klika AK, Higuera CA, Barsoum WK. Role of negative pressure wound therapy in total hip and knee arthroplasty. *World J Orthop.* 2016;7(1):30-7(Jan)

Zurovcik DR, Mody GN, Riviello R, Slocum A. Simplified Negative Pressure Wound Therapy Device for Application in Low-Resource Settings. *J Orthop Trauma.* 2015;29 Suppl 10:S33-6(Oct)

Sandy-Hodgetts K, Watts R. Effectiveness of negative pressure wound therapy/closed incision management in the prevention of post-surgical wound complications: a systematic review and meta-analysis. *JBIM Database System Rev Implement Rep.* 2015;13(1):253-303(Feb)

Rhee SM, Valle MF, Wilson LM, Lazarus G, Zenilman JM, Robinson KA. Negative pressure wound therapy technologies for chronic wound care in the home setting: A systematic review. *Wound Repair Regen.* 2015 23(4):506-17(Jul-Aug)

Hayes Medical Technology Directory-Negative Pressure Wound Therapy (NPWT) in the Adjunct Treatment of Skin Grafts. June 25, 2015. Accessed at HayesInc.com

Rhee SM, Valle MF, Wilson LM, Lazarus G, Zenilman JM, Robinson KA. Negative Pressure Wound Therapy Technologies for Chronic Wound Care in the Home Setting [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2014 Sep 15. Available from <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0073349/>

Azzopardi EA, Boyce DE, Dickson WA, Azzopardi E, Laing JH, Whitaker IS, Shokrollahi K. Application of topical negative pressure (vacuum-assisted closure) to split-thickness skin grafts: a structured evidence-based review. *Ann Plast Surg.* 2013;70(1):23-9(Jan)

Roberts DJ, Zygun DA, Grendar J, Ball CG, Robertson HL, Ouellet JF, et al. Negative-pressure wound therapy for critically ill adults with open abdominal wounds: a systematic review. *J Trauma Acute Care Surg.* 2012;73(3):629-39(Sep)

Suissa D, Danino A, Nikolis A. Negative-pressure therapy versus standard wound care: a meta-analysis of randomized trials. *Plastic Reconstr Surg* 2011;128(5):498e-503e(Nov)

Sullivan N, Snyder DL, Tipton K, et al. Negative pressure wound therapy devices. Technology Assessment Report. Prepared by the ECRI Evidence-based Practice Center for the Agency for Healthcare Research and Quality (AHRQ), Contract No. 290-2007-10063. Project ID: WNDT1108. Rockville, MD: AHRQ ;May 26, 2009.

Vikatmaa P, Juutilainen V, Kuukasjärvi P, et al. Negative pressure wound therapy: A systematic review on effectiveness and safety. *Eur J Vasc Endovasc Surg*. 2008;36(4):438-448

Agenta et al. Vacuum-assisted closure: A new method for wound control and treatment. *Annals of Plastic Surgery* 1997;38(6):663

Deva AK, Buckland GH, Fisher E et al. Topical negative pressure in wound management. *Med J Aust* 2000;173(3):128-31

Eginton MT, Brown KR, Seabrook GR et al. A prospective randomized evaluation of negative-pressure wound dressings for diabetic foot wounds. *Ann Vasc Surg* 2003;17(6):645-9

Ford CN, et al. Interim analysis of a prospective, randomized trial of vacuum-assisted closure versus the HealthPoint system in the management of pressure ulcers. *Ann Plast Surg*. 2002 Jul;49(1):55-61; discussion 61.

Huang WS, Hsieh SC, Hsieh CS et al. Use of vacuum-assisted wound closure to manage limb wounds in patients suffering from acute necrotizing fasciitis. *Asian J Surg* 2006;29(3):135-9

Joseph et al. A prospective randomized trial of vacuum-assisted closure versus standard therapy of chronic non-healing wounds. *Wounds* 2000;12(3):60-76

Wanner MB, et al. Vacuum-assisted wound closure for cheaper and more comfortable healing of pressure sores: a prospective study. *Scand J Plast Reconstr Surg Hand Surg*. 2003;37(1):28-33

Drafted By: Mark S. Cukierman, M.D.

Approved By/Date: QM Committee/07/31/2007

Revised By/Date: McNeil MD 01/12/11

Approved By/Date: QMC, 01/25/11

Reviewed without Revision By/Date: MMcNeil, MD 01/09/13

Approved By: QM Committee 1/22/13

Revised By/Date: M. McNeil, MD 05/09/16

Approved By/Date: QM Committee 6/21/16

Reviewed w/o Revision By/Date: M. McNeil, MD 03/15/18

Approved By/Date: QM Committee 04/17/18

*Consistent with Summary Plan Description (SPD). When there is discordance between this policy and the SPD, the provisions of the SPD prevail.