



# MEDICAL POLICY STATEMENT

## Arkansas PASSE

Policy Name & Number	Date Effective
Skin Substitutes-AR PASSE-MM-1417	05/01/2023
Policy Type	
<b>MEDICAL</b>	

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  
**Skin Substitutes**

B. Background

Wounds are disruptions of the skin's structural and functional integrity and normally transition through distinct phases until the skin's structure and function are restored. The purpose of skin substitutes is to provide coverage for open wounds, both deep thermal and full-thickness wounds. Wounds normally transition through four phases: hemostasis, inflammation, cellular migration and proliferation, and remodeling. At the completion of these four phases the skin's structure and function are restored. Chronic wounds can result in loss of function, wound recurrence, and significant morbidity. Pressure ulcers, diabetic foot ulcers, and venous leg ulcers are the three categories that comprise the majority of chronic wounds.

Skin substitutes have the function and composition of skin and have the potential for autologous regenerative healing when applied to a wound. Their uses span acute or chronic wounds, burns, or reconstruction, such as release of contractures secondary to severe burns. The most common classification system utilized to determine the type of skin substitute that would be appropriate for a particular wound is the Kumar Classification system, in which Class I includes temporary impervious dressing material, Class II includes single-layer durable skin substitutes, and Class III includes composite skin substitutes that replace both dermal and epidermal layers.

Skin substitutes are a heterogeneous group of biologics, synthetics, or biosynthetic materials. When determining if the use of a skin substitute is appropriate, the clinician evaluates the material being used and its properties. Individual wounds have a specific microenvironment. Various manufacturers may utilize differing processes in the development of skin substitutes but generally involve seeding selected cells onto a matrix. The matrices subsequently receive proteins and growth factors necessary for them to multiply and develop into the desired tissue.

C. Definitions

- **Allogeneic** - Having a different genetic constitution but belonging to the same species.
- **Ankle-brachial Index** - A comparison of the blood pressure measured at the ankle with blood pressure measured at the arm with lower numbers indicating narrowing or blockage of the arteries in the legs.
- **Autologous** - Being derived from the same individual, such as an individual serving as both donor and recipient.
- **Chronic Wounds** - Wounds that have not progressed along the normal healing process, generally after a 4-week duration.
- **Chronic Venous Ulcers** - A wound that takes longer than usual to heal and often occurs on the legs or ankles occurring when oxygen-poor blood flow is impaired and pools, creating pressure in the veins and damaging skin tissue.
- **Diabetic Foot Ulcers** - An open sore or wound that occurs in approximately 15 percent of patients with diabetes, commonly located on the bottom of the foot. Of

those who develop a foot ulcer, 6 percent will be hospitalized due to infection or other ulcer-related complication.

- **Pressure Ulcers** - Injuries to skin and underlying tissue resulting from prolonged pressure on the skin. Bedsores most often develop on skin that covers bony areas of the body, such as the heels, ankles, hips and tailbone.
- **Tissue Engineering** - The practice of combining scaffolds, cells, and biologically active molecules into functional tissues with a goal of assembling functional constructs that restore, maintain, or improve damaged tissues or whole organs.
- **Xenogeneic** - Denoting, relating to, or involving tissues or cells belonging to individuals of different species.

#### D. Policy

- I. CareSource considers the use of skin substitute products medically necessary under the following circumstances:
  - A. Treatment of diabetic foot ulcer when adequate circulation to the affected extremity is present as indicated by **at least one** of the following:
    1. Palpable pedal pulses;
    2. Ankle-brachial index (ABI) between 0.7 and 1.2;
    3. Dorsum transcutaneous oxygen test (TcPO<sub>2</sub>)  $\geq$  30 mm Hg within the last 60 days; or
    4. Triphasic or biphasic Doppler arterial waveforms at the ankle of affected leg.
  - B. Treatment of venous insufficiency ulcers when **all** of the following criteria are met:
    1. Adequate perfusion of involved limb;
    2. Concurrent conventional wound care;
    3. Concurrent glycemic management, if patient is also diabetic;
    4. Duration greater than 1 month;
    5. Partial-thickness or full-thickness ulcer due to venous insufficiency;
    6. No allergy to bovine products;
    7. No response to conventional therapy, including **ALL** of the following:
      - a. Compression therapy;
      - b. Dressings to maintain moist wound environment (eg, saline-moistened dressings);
      - c. Sharp debridement;
    8. No wound infection.
  - C. Treatment of burn wounds when **one** of the following criteria are met:
    1. For use as a temporary wound covering for excised full-thickness and deep partial-thickness burn wounds in individuals who require such a covering prior to autograft placement;
    2. Treatment of mid-dermal to indeterminate depth burn wounds that typically require debridement and that may be expected to heal without autografting.
  - D. Repair of scar contractures when more conservative therapeutic options have failed.
  - E. When used in conjunction with a breast reconstruction procedure.

#### II. Exclusions

The MEDICAL Policy Statement detailed above has received due consideration as defined in the MEDICAL Policy Statement Policy and is approved.

Skin substitute products that are not on the applicable fee schedule may not be reimbursable and may be considered experimental and investigational.

E. Conditions of Coverage

NA

F. Related Policies/Rules

Breast Reconstruction Surgery

G. Review/Revision History

	DATE	ACTION
<b>Date Issued</b>	02/15/2023	New policy
<b>Date Revised</b>		
<b>Date Effective</b>	05/01/2023	
<b>Date Archived</b>		

H. References

1. Agency for Healthcare Research and Quality. Technology assessment program: Skin substitutes for treating chronic wounds (2019). Retrieved December 7, 2022 from [www.effectivehealthcare.ahrq.gov](http://www.effectivehealthcare.ahrq.gov).
2. American Podiatric Medical Association (APMA). What is a diabetic foot ulcer? Retrieved December 8, 2022 from [www.apma.org](http://www.apma.org).
3. Centers for Medicare & Medicaid Services. Porcine skin and gradient pressure dressings. Retrieved November 29, 2022 from [www.cms.gov](http://www.cms.gov).
4. Cleveland Clinic. Health library: Diseases and conditions: Venous ulcers. Retrieved December 6, 2022 from [my.clevelandclinic.org](http://my.clevelandclinic.org).
5. Hart CE, Loewen-Rodriguez A, Lessem J. Dermagraft: Use in the treatment of chronic wounds. *Adv Wound Care (New Rochelle)*. 2012 Jun;1(3):138-141. doi: 10.1089/wound.2011.0282. PMID: 24527294; PMCID: PMC3623576.
6. Mayo Clinic. Bedsores (pressure ulcers). Retrieved December 8, 2022 from [www.mayoclinic.org](http://www.mayoclinic.org).
7. Mayo Clinic. Ankle-brachial index. Retrieved December 8, 2022 from [www.mayoclinic.org](http://www.mayoclinic.org).
8. MCG Health. Skin substitute, tissue-engineered (human cellular), for diabetic foot ulcer and venous ulcer. A-0326 (Last update August 31, 2022). Retrieved February 1, 2023 from [www.careweb.careguidelines.com](http://www.careweb.careguidelines.com).
9. National Institute of Biomedical Imaging and Bioengineering. Tissue engineering and regenerative medicine. Retrieved February 1, 2023 from [www.nibib.nih.gov](http://www.nibib.nih.gov).
10. Shahrokhi S. Skin Substitutes. UpToDate. Retrieved February 1, 2023 from [www.uptodate.com](http://www.uptodate.com).

This guideline contains custom content that has been modified from the standard care guidelines and has not been reviewed or approved by MCG Health, LLC.

*Independent medical review – 01/19/2023*

The MEDICAL Policy Statement detailed above has received due consideration as defined in the MEDICAL Policy Statement Policy and is approved.