Clinical Policy: Burn Surgery

Reference Number: CP.MP.186
Date of Last Revision: 11/23

Coding Implications
Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description

Early burn debridement is vital to the overall survivability and outcome of burn patients. Early grafting is also directly related to improved survival rates.[12] Grafts used to cover the wound bed include skin replacements (i.e., autograft and allograft) and skin substitutes. Autografts (split or full thickness skin grafts) are the current standard of care in burn surgery. When the total body surface area is larger than the available donor sites or tissues are too edematous to allow successful acceptance of autografts, allograft and skin substitutes are an alternative. Skin substitutes are tissue-engineered products designed to replace, either temporarily or permanently, the form and function of the skin. This policy addresses the medical necessity criteria for burn debridement and/or excision and the use of skin substitutes for burns during the acute phase of treatment.

Note: For skin substitutes for chronic wounds, refer to *CP.MP.185 Skin Substitutes for Chronic Wounds.*

Policy/Criteria

I. It is the policy of health plans affiliated with Centene Corporation® that burn treatment with debridement and/or excision is **medically necessary** for either of the following:
   A. Deep partial-thickness burn;
   B. Full-thickness burn or deeper.

II. It is the policy of health plans affiliated with Centene Corporation that burn treatment with skin replacement/substitutes (including the procedure, product, service) is **medically necessary** when meeting all of the following:
   A. Sufficient autograft is not available at the time of excision or is not feasible due to the physiological condition of the member/enrollee;
   B. No evidence of burn wound infection;
   C. Burn is either deep partial-thickness or full-thickness;
   D. Treatment with any of the following skin replacement/substitutes:
      1. Allograft (human cadaver);
      2. Xenograft (porcine);
      3. Tissue-engineered skin substitute used according to FDA indications (e.g., Biobrane®, Transcyte®, Apligraf®, TheraSkin®, Integra® Wound Matrix, Integra® meshed Bilayer Wound Matrix, Integra® Dermal Regeneration Template, or Epicel®, if used per FDA HDE).

Background

Johns Hopkins Health Library defines a burn as a type of painful wound caused by thermal, electrical, chemical, or electromagnetic energy. They cite smoking and open flame as the leading

causes of burn injury for older adults and scalding as the leading cause of burn injury for children.[1] According to the American Burn Association, burn injuries result in more than 500,000 hospital emergency department visits and approximately 50,000 acute admissions per year in the United States. The most severe burn injuries require admission to a specialty hospital or burn center.[2]

A severe or major burn is classified as any burn that is accompanied by a major trauma, inhalation injury, or a chemical or high-voltage electrical burn. Also considered severe are any burns involving over 20 percent of the total body surface area (TBSA), with the exception of first-degree burns. Burns to high-risk individuals such as older adults, young children and anyone with a major comorbidity may be considered severe even if less than 20 percent of their TBSA is involved. Burns to areas like the eyes, ears, face, hands, feet or perineum may require specialized burn center care due to the high risk of functional impairment.[3] In addition, circumferential burns of the extremities or thorax require a consultation with a burn center as they are an indicator of decreased blood flow. Deep circumferential burns of the chest may impair or prevent mechanical ventilation of the burn victim.[4]

Burns are classified in terms or degrees. First-degree burns, also called superficial partial thickness, only involve the outer layer of skin, the epidermis. These burns will be red and painful but remain dry and without blisters. First-degree burns typically heal within about one week. Second degree, or partial thickness burns, extend deeper into the dermis, include blisters, and have a wet appearance. Second-degree burns are extremely painful and can take two to three weeks to heal. Third degree, or full thickness, burns have a white or leathery appearance and will be dry to the touch. These burns are often without sensation due to nerve damage. They extend the full depth of the skin. Skin grafts are typically required for healing third degree burns. The most severe burns are called fourth degree or are classified as with extension to deep tissues. These burns will extend to the muscles, tendons and/or bone. Skin grafting and even more intensive surgeries or amputations may be required for healing.[4]

In the past, burns were treated with painful debridement of blisters, daily soaking and scrubbing, and frequent bandage changes with topical medications. Today, tissue regeneration and grafting is rapidly becoming the new standard of care in burn injuries.[3,5,6] The goal of burn treatment is to replace damaged or missing tissue with similar, healthy tissue and restore full function to the involved area with minimal to no scar tissue formation.[13] Second, third and fourth degree burns most often require a surgical procedure to allow for healing. Although some of the most severe burns may require multisystem surgeries or amputations, most burn injuries are treated with the application of skin grafts.[3,5,6]

One of the greatest advances in burn treatment has been early excision of necrotic tissue and closure of thermal burn wounds. Early excision and grafting provide a skin substitute for the wound, but further reconstructive surgeries may still be required to restore a normal appearance and function.[7] According to the International Society for Burn Injury (ISBI), management of major burns by debridement with dressings and subsequent delayed grafting may be the safest approach when resources are limited. By waiting until sloughing of the eschar has happened, minimal surgery is needed, with harvest of the skin grafts being the key surgical intervention.[13] Hydrosurgery describes the use of high-pressure water jets to debride necrotic tissue. This

technique aids in dermal skin preservation and scar reduction with twice as many patients, who noted a difference, reporting the hydrosurgically debrided area to be better or much better at 12 months, and one-fourth of patients saw no difference. Although encouraging, additional larger trials are necessary prior to recommendations for routine use.[9] By performing early excision and grafting, the patient's length of stay in the hospital is significantly reduced, as is the risk for hypertrophic scarring, joint contracture, infection and stiffness. Early closure also allows for quicker rehabilitation and lower mortality rates. As with any surgical procedure, there are also risks and challenges. Major challenges associated with burn surgery include extensive tissue loss and limited availability of tissue, exposure of other structures, scarring and limited tissue pliability.[7]

Skin Grafts
Skin grafting consists of taking tissue from another source and placing it over a wound. Sources include unaffected skin from another location on the burn victim's body, cadaveric skin grafts and amniotic chorion/membrane. The success of a skin graft relies on many factors. The graft bed must be suitable to sustain the graft during the imbibition phase of healing. Also, there must be sufficient perfusion to the graft, either from the graft bed or from another supply such as a flap repair. Skin grafts are used for coverage of exposed bone and tendons only if there is a vascularized layer of periosteum or the paratenon is intact.[7,8]

Coding Implications
This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2022, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT Codes that Support Coverage Criteria

CPT® Codes	Description
11000	Debridement of extensive eczematous or infected skin; up to 10% of body surface
11042	Debridement, subcutaneous tissue (includes epidermis and dermis, if performed); first 20 sq cm or less
11043	Debridement, muscle and/or fascia (includes epidermis, dermis, and subcutaneous tissue, if performed); first 20 sq cm or less
11044	Debridement, bone (includes epidermis, dermis, subcutaneous tissue, muscle and/or fascia, if performed); first 20 sq cm or less
11046	Debridement, muscle and/or fascia (includes epidermis, dermis, and subcutaneous tissue, if performed); each additional 20 sq cm, or part thereof (List separately in addition to code for primary procedure)

CPT® Codes	Description
11047	Debridement, bone (includes epidermis, dermis, subcutaneous tissue, muscle and/or fascia, if performed); each additional 20 sq cm, or part thereof (List separately in addition to code for primary procedure)
15271	Application of skin substitute graft to trunk, arms, legs, total wound surface area up to 100 sq cm; first 25 sq cm or less wound surface area
15272	Application of skin substitute graft to trunk, arms, legs, total wound surface area up to 100 sq cm; each additional 25 sq cm wound surface area, or part thereof (List separately in addition to code for primary procedure)
15273	Application of skin substitute graft to trunk, arms, legs, total wound surface area greater than or equal to 100 sq cm; first 100 sq cm wound surface area, or 1% of body area of infants and children
15274	Application of skin substitute graft to trunk, arms, legs, total wound surface area greater than or equal to 100 sq cm; each additional 100 sq cm wound surface area, or part thereof, or each additional 1% of body area of infants and children, or part thereof (List separately in addition to code for primary procedure)
15275	Application of skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area up to 100 sq cm; first 25 sq cm or less wound surface area
15276	Application of skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area up to 100 sq cm; each additional 25 sq cm wound surface area, or part thereof (List separately in addition to code for primary procedure)
15277	Application of skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area greater than or equal to 100 sq cm; first 100 sq cm wound surface area, or 1% of body area of infants and children
15278	Application of skin substitute graft to face, scalp, eyelids, mouth, neck, ears, orbits, genitalia, hands, feet, and/or multiple digits, total wound surface area greater than or equal to 100 sq cm; each additional 100 sq cm wound surface area, or part thereof, or each additional 1% of body area of infants and children, or part thereof (List separately in addition to code for primary procedure)

HCPCS Codes that Support Coverage Criteria

HCPCs Codes	Description
Q4100	Skin substitute, not otherwise specified
Q4101	Apligraf, per sq cm
Q4104	Integra bilayer matrix wound dressing (BMWD), per sq cm
Q4105	Integra dermal regeneration template (DRT) or Integra Omnigraft dermal regeneration matrix, per sq cm
Q4108	Integra matrix, per sq cm

HCPCs Codes	Description
Q4121	TheraSkin, per sq cm
Q4182	Transcyte, per sq cm
C9363	Skin substitute (Integra Meshed Bilayer Wound Matrix), per sq cm

Reviews, Revisions, and Approvals	Revision Date	Approval Date
New Policy adapted from WellCare's HS321. Updated description of the policy. Specified in medical necessity statement that the criteria applies to debridement and skin substitutes and their application. Removed criteria that treatment is individualized, specific, and consistent with symptoms/diagnosis, and not in excess of need. Removed criteria that treatment can be safely furnished and no equally effective or more conservative or less costly treatment is available. Removed criteria that treatment is not furnished only for convenience. Added medical necessity criteria for debridement/excision and skin substitutes. Added acceptable tissue engineered products i.e., Apligraf, TheraSkin and Integra wound matrix, Biobrane, Transcyte. Added Epicel acceptable (if used in accordance to the FDA HDE approval requirements). Removed statement that investigational products or procedures are not medically necessary.	05/20	05/20
Removed ICD-10 codes from policy. References reviewed and updated. Replaced "member" with "member/enrollee."	05/21	05/21
Annual review. References reviewed and updated. Changed, "review date," in the header to, "date of last revision," and, "date," in the revision log header to, "revision date." Removed criteria III. Stating burn surgery was, "not medically necessary when duplicating another provider's procedure, product, or service." Reviewed by specialist.	12/21	12/21
Annual review completed. Background updated and minor rewording with no clinical significance. References reviewed, reformatted and updated.	11/22	11/22
Annual review. Added criteria II.C. that burn must be deep partial-thickness or full-thickness. Added used according to FDA indications to II.D.3. References reviewed and updated. Reviewed by internal specialist.	11/23	11/23

References

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Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

Note: For Medicaid members/enrollees, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

Note: For Medicare members/enrollees, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at http://www.cms.gov for additional information.