MEDICAL POLICY – 2.01.16

Recombinant and Autologous Platelet-Derived Growth Factors for Wound Healing and Other Non-Orthopedic Conditions

BCBSA Ref. Policy: 2.01.16
Effective Date: April 1, 2020
Last Revised: March 19, 2020
Replaces: N/A

RELATED MEDICAL POLICIES:
2.01.26 Prolotherapy
2.01.98 Orthopedic Applications of Platelet-Rich Plasma
7.01.149 Amniotic Membrane and Amniotic Fluid
8.01.52 Orthopedic Applications of Stem Cell Therapy (Including Allografts and Bone Substitutes Used with Autologous Bone Marrow)
8.01.55 Stem Cell Therapy for Peripheral Arterial Disease

Select a hyperlink below to be directed to that section.

POLICY CRITERIA | DOCUMENTATION REQUIREMENTS | CODING
RELATED INFORMATION | EVIDENCE REVIEW | REFERENCES | HISTORY

∞ Clicking this icon returns you to the hyperlinks menu above.

Introduction

Special substances that are found in the blood may help cells to grow and divide. Some of these blood-derived growth factors, including some platelet-derived growth factors (PDGFs) and platelet-rich plasma (PRP), have been used to treat wounds and skin ulcers. Some of these growth factors have been made in the lab by manipulating genetic material such as DNA. These are called recombinant blood-derived growth factors. Other growth factors come from your own body. These are called autologous blood-derived growth factors. This policy discusses the use of recombinant and autologous blood-derived growth factors when treating wounds and skin ulcers.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.
## Policy Coverage Criteria

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Medical Necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recombinant platelet-derived growth factor (ie, becaplermin)</td>
<td>Recombinant platelet-derived growth factor (ie, becaplermin) may be considered medically necessary when used as an adjunct to standard wound management for the following indications (for information on patient selection criteria, see Additional Guidelines section below):</td>
</tr>
<tr>
<td></td>
<td>• Neuropathic diabetic ulcers extending into the subcutaneous tissue</td>
</tr>
<tr>
<td></td>
<td>• Pressure ulcers extending into the subcutaneous tissue</td>
</tr>
<tr>
<td></td>
<td>Other applications of recombinant platelet-derived growth factor (ie, becaplermin) are considered investigational, including but not limited to:</td>
</tr>
<tr>
<td></td>
<td>• Ischemic ulcers</td>
</tr>
<tr>
<td></td>
<td>• Venous stasis ulcers</td>
</tr>
<tr>
<td></td>
<td>• Ulcers not extending through the dermis into the subcutaneous tissue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Investigational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of platelet-rich plasma (ie, autologous blood-derived preparations)</td>
<td>Use platelet-rich plasma (ie, autologous blood-derived preparations) is considered investigational for the treatment of acute or chronic wounds, including surgical wounds and nonhealing ulcers.</td>
</tr>
</tbody>
</table>

## Additional Guidelines

### Becaplermin

- Appropriate candidates for becaplermin gel for treatment of neuropathic ulcers should meet ALL of the following criteria:
  - Adequate tissue oxygenation, as measured by a transcutaneous partial pressure of oxygen of 30 mm Hg or greater on the foot dorsum or at the margin of the ulcer
  - Full-thickness ulcer (ie, stage III or IV), extending through the dermis into subcutaneous tissues
Additional Guidelines

**AND**
- Participation in a wound management program, which includes sharp debridement, pressure relief (ie, non-weight bearing), and infection control

- Appropriate candidates for becaplermin gel for the treatment of pressure ulcers should meet ALL of the following criteria:
  - Full-thickness ulcer (ie, stage III or IV), extending through the dermis into subcutaneous tissues
  - Ulcer is in an anatomic location that can be off-loaded for the duration of treatment
  - Albumin concentration >2.5 dL
  - Total lymphocyte count >1,000/μL
  - Normal values of vitamins A and C

- Patients are typically treated once daily for up to 20 weeks or until completely healed.
  
- Application of the gel may be performed by the patient in the home

- Becaplermin is available in 2-g, 7.5-g, and 15-g tubes and is applied in a thin continuous layer, about 1/16 of an inch thick (ie, 1.6 mm or the thickness of a dime). The amount of the gel used will depend on the size of the ulcer, measured in square centimeters. However, an average-sized ulcer, measuring 3 cm², treated for an average length of time of 85 days, will require a little more than one 15-g tube. If the ulcer is treated for the maximum length of time of 140 days, 2 of the 15-g tubes would be required.

Platelet-Rich Plasma (IE, Autologous Blood-Derived Preparations)

- The American Medical Association's Department of Coding instructs that placement of platelet-rich plasma into an operative site is an inclusive component of the operative procedure performed and is not reported separately.

Documentation Requirements

*For recombinant platelet derived growth factor (ie, Regranex® [becaplermin]) to be used as an added treatment to standard wound management the following supporting documentation is required:*

- For neuropathic diabetic ulcers extending into the subcutaneous tissue (diabetic ulcers that reach the innermost layer of skin):
Documentation Requirements

- Adequate tissue oxygenation as shown by a transcutaneous partial pressure of oxygen of 30 mm Hg or greater on the top of the foot or at the margin of the ulcer
  
  AND
  - Full-thickness ulcer (stage III or IV) ulcer, extending through the dermis and into subcutaneous tissues

  AND
  - Participation in a wound management program, which includes the cutting away of tissue, pressure relief (that is, non-weight bearing), and infection control

• For Pressure ulcers extending into the subcutaneous tissue (the innermost layer of skin):
  - Full-thickness ulcer (stage III or IV), extending through the dermis and into subcutaneous tissues

  AND
  - The wound is in a location where pressure can be relieved for the duration of treatment

  AND
  - Albumin concentration greater than 2.5 dL

  AND
  - Total lymphocyte count greater than 1,000/μL

  AND
  - Normal values of vitamins A and C

Coding

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPT</strong></td>
<td></td>
</tr>
<tr>
<td>0232T</td>
<td>Injection(s), platelet rich plasma, any site, including image guidance, harvesting and preparation when performed</td>
</tr>
<tr>
<td>86999</td>
<td>Unlisted transfusion medicine procedure</td>
</tr>
<tr>
<td><strong>HCPCS</strong></td>
<td></td>
</tr>
<tr>
<td>G0460</td>
<td>Autologous platelet rich plasma for chronic wounds/ulcers, including phlebotomy, centrifugation, and all other preparatory procedures, administration and dressings, per treatment</td>
</tr>
<tr>
<td>P9020</td>
<td>Platelet rich plasma, each unit</td>
</tr>
<tr>
<td>S0157</td>
<td>Becaplermin gel 0.01%, 0.5 gm</td>
</tr>
</tbody>
</table>
### Code Description

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S9055</td>
<td>Procuren or other growth factor preparation to promote wound healing</td>
</tr>
<tr>
<td></td>
<td>(Please note that Procuren may no longer be available but this code is used to report other growth factor preparations that promote wound healing.)</td>
</tr>
</tbody>
</table>

**Note:** CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

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### Related Information

### Benefit Application

Becaplermin is used as part of a program of wound management, as described in the **Additional Guidelines**. Use of becaplermin gel is potentially high, particularly if used for off-label indications, or if used outside the setting of adequate and diligent standard wound management.

### Evidence Review

### Description

The use of blood-derived growth factors, including recombinant platelet-derived growth factors (PDGFs) and platelet-rich plasma (PRP), has been suggested as a treatment of wounds or other miscellaneous non-orthopedic conditions, including but not limited to diabetic ulcers, pressure ulcers, venous stasis ulcers, and surgical and traumatic wounds.

### Background

**Wound Healing Treatment**

A variety of growth factors have been found to play a role in wound healing, including platelet-derived growth factor (PDGF), epidermal growth factor, fibroblast growth factors, transforming growth factors, and insulin-like growth factors. Autologous platelets are a rich source of PDGF,
transforming growth factors (that function as a mitogen for fibroblasts, smooth muscle cells, osteoblasts), and vascular endothelial growth factors. Recombinant PDGF has also been extensively investigated for clinical use in wound healing.

Autologous platelet concentrate suspended in plasma, also known as platelet-rich plasma (PRP), can be prepared from samples of centrifuged autologous blood. Exposure to a solution of thrombin and calcium chloride degranulates platelets, releasing various growth factors, and results in the polymerization of fibrin from fibrinogen, creating a platelet gel. The platelet gel can then be applied to wounds or may be used as an adjunct to surgery to promote hemostasis and accelerate healing. In the operating room setting, PRP has been investigated as an adjunct to a variety of periodontal, reconstructive, and orthopedic procedures. For example, bone morphogenetic proteins are a type of transforming growth factors, and thus PRP has been used in conjunction with bone-replacement grafting (using either autologous grafts or bovine-derived xenograft) in periodontal and maxillofacial surgeries.

PRP is distinguished from fibrin glues or sealants, which have been used for many years as a surgical adjunct to promote local hemostasis at incision sites. Fibrin glue is created from platelet-poor plasma and consists primarily of fibrinogen. Commercial fibrin glues are created from pooled homologous human donors; Tisseel® (Baxter International) and Hemaseel® (Haemacure Corp.) are examples of commercially available fibrin sealants. Autologous fibrin sealants can be created from platelet-poor plasma. This policy does not address the use of fibrin sealants.

**Wound Closure Outcomes**

This policy addresses the use of recombinant PDGF products and PRP for nonorthopedic indications, which include a number of wound closure-related indications.

For this policy, the primary end points of interest for studies of wound closure are as follows, consistent with guidance from the U.S. Food and Drug Administration (FDA) for the industry in developing products for the treatment of chronic cutaneous ulcer and burn wounds:

1. Incidence of complete wound closure
2. Time to complete wound closure (reflecting accelerated wound closure)
3. Incidence of complete wound closure following surgical wound closure
4. Pain control
Summary of Evidence

Recombinant PDGFs

For individuals with diabetic lower-extremity ulcers who receive recombinant PDGF, the evidence includes randomized controlled trials (RCTs) and systematic reviews. The relevant outcomes are symptoms, change in disease status, morbid events, quality of life, and treatment-related morbidity. Results have shown improved rates of healing with use of recombinant PDGF for diabetic neuropathic ulcers and pressure ulcers. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals with pressure ulcers who receive recombinant PDGF, the evidence includes RCTs and systematic reviews. The relevant outcomes are symptoms, change in disease status, morbid events, quality of life, and treatment-related morbidity. Results have shown improved rates of healing with use of recombinant PDGF for pressure ulcers. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals with venous stasis leg ulcers or acute surgical or traumatic wounds who receive recombinant PDGF, the evidence includes small RCTs. The relevant outcomes are symptoms, change in disease status, morbid events, quality of life, and treatment-related morbidity. The level of evidence does not permit conclusions whether recombinant PDGF is effective in treating other wound types, including chronic venous ulcers or acute traumatic wounds. The evidence is insufficient to determine the effects of the technology on health outcomes.

Platelet-Rich Plasma

For individuals with chronic wounds or acute surgical or traumatic wounds who receive PRP, the evidence includes a number of small controlled trials. The relevant outcomes are symptoms, change in disease status, morbid events, quality of life, and treatment-related morbidity. Current results of trials using PRP are mixed, and the studies are limited in both size and quality. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals with chronic wounds who receive PRP, the evidence includes a number of small controlled trials. The relevant outcomes are symptoms, change in disease status, morbid events, QOL, and treatment-related morbidity. Current results of trials using PRP are mixed and the studies are limited in both size and quality. The evidence is insufficient to determine the effects of the technology on health outcomes.
Ongoing and Unpublished Clinical Trials

Some larger studies that might influence this review are listed in Table 1.

Table 1. Summary of Key Clinical Trials

<table>
<thead>
<tr>
<th>NCT No.</th>
<th>Trial Name</th>
<th>Planned Enrollment</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCT02312596a</td>
<td>A Prospective, Randomized Clinical Trial of PRP Concepts Fibrin Bio-Matrix in Chronic Non-Healing Pressure Ulcers</td>
<td>250</td>
<td>Jul 2021</td>
</tr>
<tr>
<td>NCT02312570a</td>
<td>A Prospective, Randomized Clinical Trial of PRP Concepts Fibrin Bio-Matrix in Chronic Non-Healing Pressure Ulcers</td>
<td>250</td>
<td>Jul 2021</td>
</tr>
<tr>
<td>NCT02307448a</td>
<td>Effectiveness of Autologous Platelet Rich Plasma in the Treatment of Chronic Non-Healing Wounds</td>
<td>1500</td>
<td>Dec 2020</td>
</tr>
<tr>
<td>NCT02402374a</td>
<td>Randomized, Placebo-controlled, Blind-assessor Study to Evaluate the Safety and Efficacy of Autologous Platelet Rich Plasma Gel Prepared</td>
<td>192</td>
<td>Sept 2019</td>
</tr>
<tr>
<td></td>
<td>With the RegenKit-BCT Plus Family of Kits for the Treatment of Diabetic Foot Ulcer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCT02213952</td>
<td>Efficacy of Autologous Platelet-Rich Plasma in the Treatment of Vascular Ulcers in Primary Care: Clinical Trial Phase III</td>
<td>150</td>
<td>Dec 2017</td>
</tr>
<tr>
<td>Unpublished</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCT02209662a</td>
<td>A Multi-Center, Randomized Trial Comparing the Effectiveness of APIC-PRP to Control, When Added to Standard of Care in the Treatment of</td>
<td>274</td>
<td>Dec 2015</td>
</tr>
<tr>
<td></td>
<td>Non-healing Diabetic Foot Ulcers</td>
<td></td>
<td>(unknown)</td>
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<tr>
<td>NCT02071979a</td>
<td>Registry Trial of the Effectiveness of Platelet Rich Plasma for Chronic Non-Healing Wounds (CMS)</td>
<td>1500</td>
<td>Jan 2018</td>
</tr>
<tr>
<td></td>
<td>(terminated; updated 01/16/18)</td>
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</tbody>
</table>

NCT: national clinical trial

a Denotes industry-sponsored or cosponsored trial.
Practice Guidelines and Position Statements

**American College of Physicians**

The American College of Physicians (2015) published guidelines on treatment of pressure ulcers.\(^{33}\) The guidelines noted that “although low quality evidence suggests that dressings containing PDGF [platelet-derived growth factors] promote healing, ACP supports the use of other dressings such as hydrocolloid and foam dressings, which are effective at promoting healing and cost less than PDGF dressings.”

**Association for the Advancement of Wound Care**

The Association for the Advancement of Wound Care developed guideline recommendations for the management of pressure ulcers (2010)\(^{34}\) and venous ulcers (2015)\(^{35}\):

- Pressure ulcer: “Growth factors are not indicated for PU [pressure ulcers] at this time” (level C evidence – no RCTs available comparing growth factors with A-level dressings)\(^{34}\)
- Venous ulcer: “Platelet derived growth factor has shown no significant effects on VU [venous ulcer] healing or recurrence” (level A evidence)\(^{35}\)

**National Institute for Health and Care Excellence**

The National Institute for Health and Care Excellence (2016) updated its guidance on the prevention and management of diabetic foot problems.\(^{36}\) The guidance stated that neither autologous platelet-rich plasma (PRP) gel nor platelet-derived growth factors should be offered in the treatment of diabetic foot ulcers.

**Medicare National Coverage**

The Centers for Medicare & Medicaid Services (2012) revised its national coverage decision on autologous blood-derived products for chronic non-healing wounds.\(^{37,38}\) This revision replaces prior noncoverage decisions.\(^{39,40}\)
The Centers for Medicare & Medicaid Services covers autologous PRP only for patients who have chronic non-healing diabetic, pressure, and/or venous wounds and when all of the following conditions are met:

The patient is enrolled in a clinical research study that addresses the following questions using validated and reliable methods of evaluation...

The clinical research study must meet the requirements specified below to assess the effect of PRP for the treatment of chronic non-healing diabetic, pressure, and/or venous wounds. The clinical study must address:

- Prospectively, do Medicare beneficiaries that have chronic non-healing diabetic, pressure, and/or venous wounds who receive well-defined optimal usual care, along with PRP therapy, experience clinically significant health outcomes compared to patients who receive well-defined optimal usual care for chronic non-healing diabetic, pressure, and/or venous wounds as indicated by addressing at least one of the following:
  a. Complete wound healing
  b. Ability to return to previous function and resumption of normal activities; or
  c. Reduction of wound size or healing trajectory, which results in the patient’s ability to return to previous function and resumption of normal activities?

**Regulatory Status**

**Regranex®**

In 1997, becaplermin gel (Regranex®; Smith & Nephew), a recombinant PDGF product, was approved by the FDA for the following labeled indication:

Regranex Gel is indicated for the treatment of lower extremity diabetic neuropathic ulcers that extend into the subcutaneous tissue or beyond and have an adequate blood supply. When used as an adjunct to, and not a substitute for, good ulcer care practices including initial sharp débridement, pressure relief and infection control, REGRANEX Gel increases the complete healing of diabetic ulcers.
The efficacy of REGRANEX Gel for the treatment of diabetic neuropathic ulcers that do not extend through the dermis into subcutaneous tissue or ischemic diabetic ulcers has not been evaluated...

In 2008, the manufacturer added the following black box warning to the labeling for Regranex®:

An increased rate of mortality secondary to malignancy was observed in patients treated with 3 or more tubes of Regranex Gel in a postmarketing retrospective cohort study. Regranex Gel should only be used when the benefits can be expected to outweigh the risks. Regranex Gel should be used with caution in patients with known malignancy.

**Platelet-Rich Plasma**

The FDA regulates human cells and tissues intended for implantation, transplantation, or infusion through the Center for Biologics Evaluation and Research, under Code of Federal Regulation title 21, parts 1270 and 1271. Blood products such as PRP are included in these regulations.

Under these regulations, certain products including blood products such as PRP are exempt and therefore do not follow the traditional FDA regulatory pathway. To date, the FDA has not attempted to regulate activated PRP.

Numerous PRP preparation systems have been cleared for marketing by the FDA through the 510(k) process. These devices are intended to concentrate patient plasma at the point of care during bone grafting procedures. The use of different devices and procedures can lead to variable concentrations of active platelets and associated proteins, increasing variability between studies of clinical efficacy.

In 2018, the “Boxed Warning” and “Warnings and Precautions” were changed to remove “increased rate of cancer mortality” and “cancer mortality,” respectively.

**References**


<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/05/97</td>
<td>Add to Medicine Section - New Policy</td>
</tr>
<tr>
<td>08/17/99</td>
<td>Replace Policy - Revised policy; addresses becaplermin gel.</td>
</tr>
<tr>
<td>10/08/02</td>
<td>Replace Policy - Policy reviewed with changes: new policy statement on becaplermin gel for treatment of pressure ulcers.</td>
</tr>
<tr>
<td>10/16/03</td>
<td>Replace Policy - Policy updated; no change in policy statement. Information regarding Autologel and SafeBlood provided. Title updated by removing Platelet and adding Blood.</td>
</tr>
<tr>
<td>01/11/05</td>
<td>Replace Policy - Policy updated focusing on autologous blood derived wound healing products; reference added; no change in policy statement.</td>
</tr>
<tr>
<td>01/10/06</td>
<td>Presented at January MPC - Policy revised; policy statement added regarding miscellaneous use of platelet-rich plasma as a primary procedure. Description and rationale now include discussion of platelet-rich plasma. MPC requested further research before adopting.</td>
</tr>
<tr>
<td>02/14/06</td>
<td>Replace Policy - Policy revised per MPC request of removing description regarding fibrin sealant and surgical indications (primary wound closure).</td>
</tr>
<tr>
<td>06/16/06</td>
<td>Update Scope and Disclaimer - No other changes</td>
</tr>
<tr>
<td>07/10/07</td>
<td>Replace Policy - Policy updated with literature search; references added; policy statement unchanged.</td>
</tr>
<tr>
<td>08/12/08</td>
<td>Replace Policy - Policy updated with literature search; no change to the policy statement.</td>
</tr>
<tr>
<td>01/13/09</td>
<td>Code Updates - Codes Q4102 and Q4103 added, effective 1/1/09.</td>
</tr>
<tr>
<td>10/13/09</td>
<td>Replace Policy - Policy updated with literature search; policy statement updated to include “acute” wounds for PRP. References added.</td>
</tr>
<tr>
<td>12/27/10</td>
<td>Codes Updated - CPT code 0232T added to policy; no other changes.</td>
</tr>
<tr>
<td>06/13/11</td>
<td>Replace Policy - Policy updated with literature search, reference numbers 11-14, 18, 19, 23, 24 added, policy statements unchanged. ICD-10 codes added to policy. CPT coding related to platelet-rich plasma also updated. Title changed to “Recombinant and Autologous Platelet-Derived Growth Factors as a Treatment of Wound Healing and Other Conditions.”</td>
</tr>
<tr>
<td>03/22/12</td>
<td>Minor update, Related Policies updated with 7.01.113 and 1.01.16.</td>
</tr>
<tr>
<td>06/26/12</td>
<td>Replace policy. Policy updated with literature search through February 2012, references added and reordered; some references removed; policy statements unchanged. Codes Q4102 and Q4103 removed; these do not apply to this policy and appear on 7.01.113.</td>
</tr>
<tr>
<td>Date</td>
<td>Comments</td>
</tr>
<tr>
<td>------------</td>
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</tr>
<tr>
<td>07/25/12</td>
<td>Related Policies Update: 8.01.52 and 8.01.55 have been added.</td>
</tr>
<tr>
<td>08/24/12</td>
<td>Update Related Policies – Remove 1.01.16 as it was archived. Update coding section – ICD-10 codes are now effective 10/01/2014.</td>
</tr>
<tr>
<td>07/23/13</td>
<td>Replace policy. Policy updated with literature search through March 8, 2013; references added and reordered; policy statements unchanged.</td>
</tr>
<tr>
<td>03/17/14</td>
<td>Update Related Policies. Remove 7.01.100 as it was archived.</td>
</tr>
<tr>
<td>09/23/14</td>
<td>Update Related Policies. Add 7.01.142.</td>
</tr>
<tr>
<td>07/14/15</td>
<td>Annual Review. Policy title changed to “Recombinant and Autologous Platelet-Derived Growth Factors as a Treatment of Wound Healing and Other Non-Orthopedic Conditions.” Orthopedic applications of platelet-rich plasma (PRP) policy statements removed from this policy and placed in new Policy No. 2.01.98. Coding table in Policy Guidelines updated to match Coding section of policy. Policy updated with literature review through April 15, 2015; references 1 and 3 added. Policy statements removed as noted, others remain unchanged. CPT code 20926 removed; platelet-rich plasma is not considered a tissue graft. ICD-9 and ICD-10 codes removed; these were for informational purposes only.</td>
</tr>
<tr>
<td>09/01/15</td>
<td>Update Related Policies. Add 7.01.149</td>
</tr>
<tr>
<td>10/16/15</td>
<td>Update Related Policies. Remove 7.01.142.</td>
</tr>
<tr>
<td>04/01/16</td>
<td>Annual Review, approved March 8, 2016. Policy updated with literature review through October 29, 2015; references 16 and 18-19 added. Policy statements unchanged.</td>
</tr>
<tr>
<td>09/22/17</td>
<td>Policy moved to new format. No changes to policy statements.</td>
</tr>
<tr>
<td>03/01/19</td>
<td>Annual Review, approved February 25, 2019. Policy updated with literature review through October 2018; 12, 27, and 30 references added. Policy statements unchanged.</td>
</tr>
</tbody>
</table>

Disclaimer: This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and
local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2020 Premera All Rights Reserved.

**Scope:** Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy does not apply to Medicare Advantage.
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- Provides written information in other formats (large print, audio, accessible electronic formats, other formats)
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  - Qualified interpreters
- Information written in other languages

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Email AppealsDepartmentInquiries@Premera.com

You can file a grievance in person or by mail, fax, or email. If you need help filing a grievance, the Civil Rights Coordinator is available to help you.

You can also file a civil rights complaint with the U.S. Department of Health and Human Services, Office for Civil Rights, electronically through the Office for Civil Rights Complaint Portal, available at https://ocrportal.hhs.gov/ocr/portal/lobby.jsf, or by mail or phone at:
U.S. Department of Health and Human Services
200 Independence Avenue SW, Room 509F, HHH Building
Washington, DC 20201, 1-800-368-1019, 800-537-7697 (TDD)

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Call 800-722-1471 (TTY: 800-842-5357).

Arabic (Arabic):
يحترم هذا الإشعار معلومات هامة. قد يحتوي هذا الإشعار معلومات هامة如果你想提出抗议，请打电话800-722-1471 (TTY: 800-842-5357)

Chinese (Chinese):
本通知有重要的讯息。本通知可能有關於您透過Premera Blue Cross提交的申請或保険的重要訊息。本通知內可能有重要日期。您可能需要在截止日期之前採取行動。以保留您的健康保險或費用補貼。您有權利免費以您的母語得到本訊息和幫助。請撥電話800-722-1471 (TTY: 800-842-5357).

Cushite (Oromo):

Croatian (Croatian):
Kryol (Ilocano):
Iloko (Ilocano): Daytoy a Pakdaar ket naglaon iti Napateg nga Impormasjon. Daytoy a pakdaar mabalini nga adda ket naglaon iti napateg nga impormasjon maipanggep iti aplikasyoony nga coverange babaen iti Premera Blue Cross. Daytoy ket mabalini dagiti importante a peta iit daytoy a pakdaar. Mabalini nga adda rumbeng nga aramidengni nga addang sabbay dagiti particular iti naituding nga aldaw tapno mapagtalinaeyo ti coverange ti salun-atyo wenno tulong kadagiti gastos. Adda karbenganyo a mangala iti daytoy nga impormasjon ken tulong iti bukaddyo a pagasasao nga awan ti bayadanyo. Tumawag iti numero nga 800-722-1471 (TTY: 800-842-5357).

Deutsche (German):

Dutch (Dutch):
Tsab ntawv tshaj xo no muaj cov ntshiab lus tseem ceeb. Tej zaum tsab ntawv tshaj xo no muaj cov ntshiab lus tseem ceeb bxog koj daim ntawv thov kev pab los yong kev yong kev pab cuam los ntawm Premera Blue Cross. Tej zaum muaj cov hnbv tseem ceeb uas rau hauv daim ntawm no. Tej zaum koj kuy uav tan uae qam yam uas peb kom koj uas tis puub dhuav cov caij nyong uas teev tseg rau hauv daim ntawv no mas koj thaj yuv rav taij bas kev pab cuam kho moob los yong kev yov pab them tej nqj kho moob ntawv. Koj muaj cai kom lawv muab cov ntshiab lus uas tau muab sau uas koj hom lus pub dawb rau koj. Hu rau 800-722-1471 (TTY: 800-842-5357).

English (English):
This Notice has Important Information. This notice may have important information about your application or coverage through Premera Blue Cross. There may be key dates in this notice. You may need to take action by certain deadlines to keep your health coverage or help with costs. You have the right to get this information and help in your language at no cost.

Call 800-722-1471 (TTY: 800-842-5357).
Premera Blue Cross (TTY: 800-842-5357).