Medical Policy

Pneumatic Compression Pumps for Treatment of Lymphedema and Venous Ulcers

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Policy Number: 354
BCBSA Reference Number: 1.01.18
NCD/LCD: National Coverage Determination (NCD) for Pneumatic Compression Devices (280.6)

Related Policies
- Bioimpedance Devices for the Detection of Lymphedema, #261
- Noncontact Ultrasound Treatment for Wounds, #657

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

Single compartment or multichamber nonprogrammable lymphedema pumps applied to the limb may be considered MEDICALLY NECESSARY for the treatment of lymphedema that has failed to respond to conservative measures, such as elevation of the limb and use of compression garments.

Single compartment or multichamber programmable lymphedema pumps applied to the limb may be considered MEDICALLY NECESSARY for the treatment of lymphedema when:

1. The individual is otherwise eligible for nonprogrammable pumps; and
2. There is documentation that the individual has unique characteristics that prevent satisfactory pneumatic compression with single-compartment or multichamber nonprogrammable lymphedema pumps (e.g., significant scarring).

Single compartment or multichamber lymphedema pumps applied to the limb are considered INVESTIGATIONAL in all situations other than those specified above in the first two policy statements.

The use of lymphedema pumps to treat the trunk or chest in patients with lymphedema limited to the upper and/or lower limbs is INVESTIGATIONAL.

The use of pneumatic compression pumps to treat venous ulcers is INVESTIGATIONAL.
Medicare HMO BlueSM and Medicare PPO BlueSM Members

Medical necessity criteria and coding guidance can be found through the link(s) below.

National Coverage Determinations (NCDs)

National Coverage Determination (NCD) for Pneumatic Compression Devices (280.6)

**Note:** To review the specific NCD, please remember to click “accept” on the CMS licensing agreement at the bottom of the CMS webpage.

Prior Authorization Information

Inpatient
- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient
- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

<table>
<thead>
<tr>
<th>Commercial Managed Care (HMO and POS)</th>
<th>Prior authorization is not required.</th>
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<tbody>
<tr>
<td>Commercial PPO and Indemnity</td>
<td>Prior authorization is not required.</td>
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<tr>
<td>Medicare HMO BlueSM</td>
<td>Prior authorization is not required.</td>
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<tr>
<td>Medicare PPO BlueSM</td>
<td>Prior authorization is not required.</td>
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</table>

CPT Codes / HCPCS Codes / ICD Codes

*Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.*

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

CPT Codes

There are no specific CPT codes for these services.

HCPCS Codes

<table>
<thead>
<tr>
<th>HCPCS codes</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>E0650</td>
<td>Pneumatic compressor, nonsegmental home model</td>
</tr>
<tr>
<td>E0655</td>
<td>Nonsegmental pneumatic appliance for use with pneumatic compressor, half arm</td>
</tr>
<tr>
<td>E0660</td>
<td>Nonsegmental pneumatic appliance for use with pneumatic compressor, full leg</td>
</tr>
<tr>
<td>E0665</td>
<td>Nonsegmental pneumatic appliance for use with pneumatic compressor, full arm</td>
</tr>
<tr>
<td>E0666</td>
<td>Nonsegmental pneumatic appliance for use with pneumatic compressor, half leg</td>
</tr>
<tr>
<td>E0651</td>
<td>Pneumatic compressor, segmental home model without calibrated gradient pressure</td>
</tr>
<tr>
<td>E0656</td>
<td>Segmental pneumatic appliance for use with pneumatic compressor, trunk</td>
</tr>
<tr>
<td>E0657</td>
<td>Segmental pneumatic appliance for use with pneumatic compressor, chest</td>
</tr>
<tr>
<td>E0667</td>
<td>Segmental pneumatic appliance for use with pneumatic compressor, full leg</td>
</tr>
<tr>
<td>E0668</td>
<td>Segmental pneumatic appliance for use with pneumatic compressor, full arm</td>
</tr>
<tr>
<td>E0669</td>
<td>Segmental pneumatic appliance for use with pneumatic compressor, half leg</td>
</tr>
<tr>
<td>E0652</td>
<td>Pneumatic compressor, segmental home model with calibrated gradient pressure</td>
</tr>
<tr>
<td>E0670</td>
<td>Segmental pneumatic appliance for use with pneumatic compressor, integrated, 2 full legs and trunk</td>
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</table>
Description

Lymphedema and Venous Ulcers

Lymphedema is an abnormal accumulation of lymph fluid in subcutaneous tissues or body cavities resulting from obstruction of lymphatic flow. Lymphedema can be subdivided into primary and secondary categories. Primary lymphedema has no recognizable etiology, while secondary lymphedema is related to a variety of causes including surgical removal of lymph nodes, post radiation fibrosis, scarring of lymphatic channels, or congenital anomalies.

Venous ulcers, which occur most commonly on the medial distal leg, can develop in patients with chronic venous insufficiency when leg veins become blocked. Standard treatment for venous ulcers includes compression bandages or hosiery supplemented by conservative measures such as leg elevation. Pneumatic compression pumps are proposed as a treatment for venous ulcers, especially for patients who do not respond to these standard therapies.

Summary

Pneumatic compression pumps are proposed as a treatment for patients with lymphedema who have failed conservative measures. They are also proposed to supplement standard care for patients with venous ulcers. A variety of pumps are available; they can be single chamber (nonsegmented) or multichamber (segmented) and have varying designs and complexity.

For individuals who have lymphedema who failed to respond to conservative therapy who receive pneumatic compression pumps applied to limb only, the evidence includes randomized controlled trials (RCTs) and systematic reviews of RCTs. Relevant outcomes are symptoms, change in disease status, functional outcomes, and quality of life. Most RCTs were rated as moderate-to-high quality by an Agency for Healthcare Research and Quality review, and about half reported significant improvements with pumps compared with conservative care. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have lymphedema who failed to respond to conservative therapy who receive pneumatic compression pumps applied to trunk and/or chest as well as a limb, the evidence includes 2 RCTs comparing treatment with and without truncal involvement. Relevant outcomes are symptoms, change in disease status, functional outcomes, and quality of life. In 1 RCT, 2 of 4 key outcomes were significantly better with truncal involvement than without. This trial was limited by small sample size, failure to adjust statistically for multiple primary outcomes, and use of intermediate outcomes (eg, amount of fluid removed) rather than health outcomes (eg, functional status, quality of life). The other RCT did not find statistically significant differences between groups for any of the efficacy outcomes. The available evidence does not demonstrate that pumps treating the trunk or chest provide incremental improvement beyond that provided by pumps treating the affected limb only. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have venous ulcers who receive pneumatic compression pumps, the evidence includes several RCTs and a systematic review of RCTs. Relevant outcomes are symptoms, change in disease status, morbid events, and quality of life. A meta-analysis of 3 trials found significantly higher healing rates with lymphedema pumps plus continuous compression than with continuous compression alone; however, 2 of the 3 trials were judged to be at high-risk of bias. Moreover, the 2 trials comparing lymphedema pumps with continuous compression did not find significant between-group differences in healing rates. The evidence is insufficient to determine the effects of the technology on health outcomes.
## Policy History

<table>
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<tr>
<th>Date</th>
<th>Action</th>
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<tr>
<td>4/2017</td>
<td>New references added from BCBSA National medical policy.</td>
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<td>12/2015</td>
<td>National Coverage Determination (NCD) for Pneumatic Compression Devices (280.6) added.</td>
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<tr>
<td>11/2015</td>
<td>New references added from BCBSA National medical policy.</td>
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<tr>
<td>6/1/2012</td>
<td>New policy describing ongoing coverage and non-coverage.</td>
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## Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:
- [Medical Policy Terms of Use](#)
- [Managed Care Guidelines](#)
- [Indemnity/PPO Guidelines](#)
- [Clinical Exception Process](#)
- [Medical Technology Assessment Guidelines](#)

## References


