

LUNG VOLUME REDUCTION SURGERY

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11/16, 11/17, 11/18

Date Of Origin: November 19, 2003

Status: Current

I. POLICY/CRITERIA

Priority Health will cover LVRS when *all* of the following are present:

1. Either of the following :
 - a. Severe upper lobe emphysema; *or*
 - b. Severe non-upper lobe emphysema with low exercise capacity.
2. Pulmonary Rehabilitation as follows:
 - a. Pre-operative: 6 to 10 week series of at least 16, and no more than 20, preoperative sessions each lasting a minimum of two hours.
 - b. Post-operative: at least 6 and no more than 10 postoperative sessions each lasting a minimum of two hours, within 8 to 9 weeks of the LVRS.
 - c. Specific components of the pulmonary rehabilitation program must include:
 - Comprehensive evaluation of medical, psychosocial and nutritional needs
 - Setting of goals for education and exercise training
 - Exercise training (lower extremity, flexibility, strengthening, and upper extremity)
 - Education about emphysema and medical treatments
 - Psychosocial counseling
 - Nutritional counseling
3. All of the following:
 - a. Radiographic evidence of moderate to severe bilateral emphysema,
 - b. Forced expiratory volume in one second (FEV₁) \leq 45% predicted or \geq 15% predicted if age \geq 70 years)
 - c. Non-smoking for at least 4 months
 - d. Participation in pulmonary rehabilitation with the attainment of preset performance goals (e.g., ability to complete three minute unloaded pedaling in an exercise tolerance test).
4. None of the following:
 - a. Previous LVRS or lobectomy,

- b. Patient is high risk. High-risk patient is defined as one with a forced expiratory volume in the first second (FEV₁) that is 20% or less of their predicted value and either homogeneous distribution of emphysema on CT scan or low carbon monoxide diffusing capacity (D_LCO) that is 20% or less of their predicted value.
 - c. COPD conditions unsuitable for LVRS (e.g., bronchiectasis, chronic bronchitis, and CT evidence of diffuse emphysema judged unsuitable),
 - d. Systemic disease or neoplasias expected to compromise survival during five-year period,
 - e. Medical conditions or other circumstances make it likely that the patient will be unable to complete the pre- and postoperative pulmonary diagnostic and therapeutic program required for surgery
5. LVRS approach must be a bilateral excision of damaged lung with stapling performed via median sternotomy or video-assisted thoracoscopic surgery.

II. MEDICAL NECESSITY REVIEW

Required Not Required Not Applicable

III. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- ❖ **HMO/EPO:** *This policy applies to insured HMO/EPO plans.*
- ❖ **POS:** *This policy applies to insured POS plans.*
- ❖ **PPO:** *This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.*
- ❖ **ASO:** *For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.*
- ❖ **INDIVIDUAL:** *For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.*
- ❖ **MEDICARE:** *Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, this policy applies.*
- ❖ **MEDICAID/HEALTHY MICHIGAN PLAN/MICHILD:** *For Medicaid/Healthy Michigan Plan/MICHild members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--00.html, the Michigan Medicaid Provider Manual will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee*

IV. DESCRIPTION

Lung volume reduction surgery (LVRS) involves removal of bullae and nonfunctional lung tissue in patients with chronic obstructive pulmonary disease (COPD) due to emphysema. The objective of this procedure is to allow reexpansion of the remaining compressed lung, which in turn may allow the lung to inflate to a more normal capacity and to function more efficiently, and may reduce the size of the thoracic cavity to achieve a more optimal respiratory muscle action and ventilatory capacity.

There is some evidence from randomized trials that LVRS can produce significant improvements in pulmonary function, dyspnea, exercise capacity, and quality of life compared with medical therapy in selected patients with upper lobe pathology, and can reduce mortality in patients with upper lobe pathology and low exercise tolerance. However, LVRS can also increase mortality in certain patient populations, and there is a relatively high early mortality rate associated with the procedure. LVRS is palliative not curative.

V. CODING INFORMATION

ICD-10 Codes that may support medical necessity:

J43.0 - J43.9 Emphysema

CPT/HCPCS Codes:

- 32141 Thoracotomy; with resection-plication of bullae, includes any pleural procedure when performed
- 32491 Removal of lung, other than total pneumonectomy; excision-plication of emphysematous lung(s) (bullous or non-bullous) for lung volume reduction, sternal split or transthoracic approach, with or without any pleural procedure
- 32655 Thoracoscopy, surgical; with resection-plication of bullae, includes any pleural procedure when performed
- 32672 Thoracoscopy, surgical; with resection-plication for emphysematous lung (bullous or non-bullous) for lung volume reduction (LVRS), unilateral includes any pleural procedure, when performed

Billed by facilities under only:

- G0302 Preoperative pulmonary surgery services for preparation for LVRS, complete course of services, to include a minimum of 16 days of services
- G0303 Preoperative pulmonary surgery services for preparation for LVRS, 10 to 15 days of services
- G0304 Preoperative pulmonary surgery services for preparation for LVRS, 1 to 9 days of services
- G0305 Post discharge pulmonary surgery services after LVRS, minimum of 6 days of services

Related Procedures – Not Covered:

- 31647 Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with balloon occlusion, when performed, assessment of air leak, airway sizing, and insertion of bronchial valve(s), initial lobe
- 31648 Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with removal of bronchial valve(s), initial lobe
- 31649 Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with removal of bronchial valve(s), each additional lobe (List separately in addition to code for primary procedure)
- 31651 Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with balloon occlusion, when performed, assessment of air leak, airway sizing, and insertion of bronchial valve(s), each additional lobe (List separately in addition to code for primary procedure[s])

VI. REFERENCES

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