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Northwest Region Utilization Review

UR 79: Peroral Endoscopic Myotomy (POEM) Medical Necessity Criteria

Department: Non-Behavioral Health
Section: KPNW Region
Applies to: KPNW Region
Review Responsibility: Nathan Bronson, MD, General Surgery; Benjamin Bryant, MD, Gastroenterology

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BACKGROUND

CLINICAL BACKGROUND (*excerpted from Hayes 2019*)

POEM is a natural orifice transluminal endoscopic surgery technique. The technique involves guiding an endoscope through the esophagus, making an incision in the mucosa, creating a submucosal tunnel for access to the lower esophagus and gastroesophageal junction, and cutting the muscle fibers in the lower esophagus and proximal stomach. Internal incisions are closed with clips after myotomy is complete. Rationale for developing the POEM procedure includes the ability to combine the minimal invasiveness of endoscopic procedures, such as pneumatic dilation (PD), with the therapeutic goal of a surgical myotomy, such as laparoscopic Heller myotomy (LHM). Natural orifice surgery, such as POEM, aims to reduce procedure-related pain and return patients to regular activities sooner than surgeries requiring external incisions.[1]

DEFINITIONS

The three types of achalasia based on the Chicago Classification of patterns of esophageal pressurization on high-resolution manometry (HRM) (CC v3.0) include the following:

- Type I (classic achalasia) – Incomplete LES relaxation, aperistalsis and absence of esophageal pressurization. Swallowing results in no significant change in esophageal pressurization and has 100% failed peristalsis with a distal contractile integral (DCI, an index of the strength of distal esophageal contraction) < 100 mmHg.
- Type II – Incomplete LES relaxation, aperistalsis and panesophageal pressurization in at least 20% of swallows. Swallowing results in simultaneous pressurization that spans the entire length of the esophagus. Type II achalasia has 100% failed peristalsis and panesophageal pressurization with ≥ 20% of swallows.
- Type III (spastic achalasia) – Incomplete LES relaxation and premature contractions (distal latency [DL] < 4.5 seconds) in at least 20% of swallows. Swallowing results in abnormal, lumen-obliterating contractions or spasms. Type III achalasia has no normal peristalsis and premature (spastic) contractions with DCI > 450 mmHg-sec-cm with ≥20% of swallows.[2, 3]

POLICY AND CRITERIA

For Medicare Members

Source	Policy
CMS Coverage Manuals	None
National Coverage Determinations (NCD)	None
Local Coverage Determinations (LCD)	None
Local Coverage Article	None
Kaiser Permanente Medical Policy	Due to the absence of a NCD, LCD, or other coverage guidance, Kaiser Permanente has chosen to use their own Clinical Review Criteria, "Peroral Endoscopic Myotomy (POEM)" for medical necessity determinations for Medicare members.

Peroral endoscopic myotomy (POEM) is considered medically necessary when **ALL of the following** criteria are met:

- Individual is age 18 years or older; AND
- Achalasia type III is diagnosed using esophageal manometry; OR
- Achalasia type I and II covered only if patient is deemed not a surgical candidate; AND
- Patient must be counseled about 20-25% risk of GERD after POEM.

Peroral endoscopic myotomy (POEM) for **ANY other indication** is considered experimental, investigational, and unproven.

CONTRAINDICATIONS TO BE DETERMINED PRE-OPERATIVELY BY THE SURGEON

- Significant coagulation disorders
- Liver cirrhosis with portal hypertension
- Severe pulmonary disease (e.g., use of supplemental oxygen, COPD graded as GOLD 3 or 4)
- Esophageal malignancy
- ASA IV or greater

SPECIAL GROUP CONSIDERATIONS

Washington Medicaid (Molina): Subject to criteria hierarchy
Oregon Medicaid: Subject to the Prioritized List of Healthcare Services

RATIONALE

The Medical Technology Assessment Committee (MTAC) of KPWA reviewed the evidence comparing peroral endoscopic myotomy (POEM) to laparoscopic Heller myotomy for esophageal achalasia in 2022. Their findings include the following conclusions:

"There is insufficient published evidence to determine that POEM is superior to LHM in alleviating the symptoms associated with achalasia. Moderate quality evidence from a single published open-label non-inferiority trial with potential observation bias, shows that POEM was noninferior to LHM in alleviating the symptoms of achalasia in the short-term (2 years follow-up). There is evidence from the published RCT as well as several other non-randomized observational studies and meta-analyses indicating that POEM is associated with a significantly higher rate of developing acid reflux and/or erosive esophagitis.

There is insufficient evidence to determine the long-term effectiveness and safety of POEM for the management of patients with esophageal achalasia. Long-term large randomized controlled trials are needed to determine the safety and efficacy of POEM in the management of patients with esophageal achalasia."[4]

Hayes, Inc. conducted a Health Technology Assessment on peroral endoscopic myotomy (POEM) for treatment of esophageal achalasia in 2019. Their findings include the following conclusion:

"The available evidence, mainly from poor-quality studies, suggests that the POEM procedure is generally safe and may achieve at least similar results to both LHM and PD for most efficacy and harms outcomes. The clinical significance of any differences detected from baseline or between groups was not discussed in the evaluated studies. The body of evidence regarding comparisons between POEM and LHM is of moderate size (16 studies), whereas evidence on POEM versus PD was presented in only 4 studies. Additional studies of fair to good quality are needed to elucidate optimal treatment protocols, patient selection criteria, and provide information for longer-term outcomes."[1]

CODES

CPT Code	Description
43497	Lower Esophageal Myotomy, Transoral (IE, Peroral Endoscopic Myotomy [POEM])

REFERENCES

1. Hayes Inc. *Peroral Endoscopic Myotomy for Treatment of Esophageal Achalasia*. 2019. Dec 3, 2019.
2. Schlottmann F, Herbella FA, Patti MG. Understanding the Chicago Classification: From Tracings to Patients. *J Neurogastroenterol Motil*. Oct 30 2017;23(4):487-494. doi:10.5056/jnm17026
3. Spechler SJ, Nelson M, Souza RF. Invited response to letter to the editor by Tustumi et al. *Neurogastroenterol Motil*. May 2021;33(5):e14114. doi:10.1111/nmo.14114
4. Medical Technology Assessment Committee (MTAC). *Per-Oral Endoscopic Myotomy (POEM) Compared to Laparoscopic Heller Myotomy for Esophageal Achalasia*. 2022. *MTAC Report*.