

### Kaiser Foundation Health Plan of Washington

## *Clinical Review Criteria* Peroral Endoscopic Myotomy (POEM) for Esophageal Achalasia

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## 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, " <i>Peroral Endoscopic Myotomy (POEM) for Esophageal</i> <i>Achalasial</i> " for medical necessity determinations. Use the Non- Medicare criteria below.

#### For Non-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
- Achalasia type III is diagnosed using esophageal manometry
- Achalasia type I and II covered only if patient is deemed not a surgical candidate
- 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 for Peroral endoscopic myotomy (POEM); if **ONE of the following** conditions is present, the patient should not undergo POEM:

- Severe erosive esophagitis
- Significant coagulation disorders
- Liver cirrhosis with portal hypertension
- Severe pulmonary disease
- Esophageal malignancy
- ASA IV or greater
- •
- Prior therapy that may compromise the integrity of the esophageal mucosa or lead to submucosal fibrosis, including recent esophageal surgery, radiation, endoscopic mucosal resection, or radiofrequency ablation

**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.</li>
- 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 pan-esophageal pressurization with ≥ 20 percent 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 percent of swallows (Spechler, 2021a; Schlottmann, et al., 2017).

#### If requesting this service, please send the following documentation to support medical necessity:

• Last 3 months of clinical notes from requesting provider &/or consulting specialist.

The following information was used in the development of this document and is provided as background only. It is provided for historical purposes and does not necessarily reflect the most current published literature. When significant new articles are published that impact treatment option, Kaiser Permanente will review as needed. This information is not to be used as coverage criteria. Please only refer to the criteria listed above for coverage determinations.

#### Background

Esophageal achalasia (EA) is a rare esophageal motility disorder characterized by loss of peristalsis of the esophageal body and failure of the lower esophageal sphincter (LES) to relax in response to swallowing. The most common form of EA is idiopathic and the exact etiology for the disappearance of myenteric neurons that coordinate esophageal peristalsis and relaxation of LES is unknown. Esophageal achalasia results in retention of food and saliva in the esophagus leading to difficulty in swallowing, regurgitation, aspiration, chest pain, weight loss, and eventually irreversible dilatation of the esophageal body (Kumagai 2015, Patel 2016, Zhang 2016).

Esophageal achalasia is irreversible, and all current therapeutic interventions are palliative with the aim of reducing the pressure at the esophagastric junction (EGJ), to facilitate the transit of food boluses into the stomach and reduce the related symptoms. Treatment options vary from pharmacotherapy (e.g., calcium channel antagonists and nitrates), botulinum toxin injection (BTI), endoscopic pneumatic dilatation (PD), surgical myotomy of the lower esophageal sphincter, to esophagostomy for end-stage achalasia. Each of the therapeutic modalities has its indications, advantages, and limitations. e.g., pharmacological therapy does not have a durable effect and may be only suitable for patients with mild disease, elderly patients or those who cannot undergo more invasive treatment; BTI has a short-lived action; pneumatic dilatation is associated with symptom recurrence and post-procedure gastroesophageal reflux (GERD); and surgical myotomy usually requires and additional fundoplication procedure to prevent GERD (Talukdar 2015, Marano 2016, Zhang 2016).

Currently laparoscopic Heller myotomy (LHM) is the treatment of choice for patients with esophageal achalasia who are fit for surgery. It provides superior and long-lasting symptom relief compared to other treatment modalities including pneumatic dilatation of the esophagus. LHM involves full thickness myotomy along the distal 4-6 cm of the esophagus and extending to 2-3 cm on to the gastric wall allowing the LES to remain open. LMH is usually followed by partial anterior fundoplication (Dor fundoplication). The procedure is minimally invasive, yet, the surgical access to the abdomen remains a potential source of wound infection, port-site hernia formation, and immediate postoperative pain (Kumagai 2015, Wei 2015, Morano 2016, Zhang 2016, Sanaka 2017, Docimo 2017, Kahrilis 2017).

Per-Oral Endoscopic Myotomy (POEM), was developed in Japan in 2008, and introduced into practice as a minimally invasive technique for the management of patients with achalasia. The procedure involves the creation of a submucosal tunnel followed by myotomy of the circular muscle layer to reduce pressure at the LES. It is performed under general anesthesia and consists of five major steps: 1. Patient position and planning endoscopy, 2. Entry into the submucosal space, 3. Creation of a submucosal tunnel, 4. Endoscopic myotomy of the circular muscles, and 5. Closure of the mucosal entrance. Unlike LHM which involves complete division of both circular

and longitudinal LES muscle layers, POEM only cuts the inner, circular LES muscles maintaining the integrity of the longitudinal muscles. Thus, POEM has the potential advantages of both endoscopic dilatation and durable surgical myotomy in a single procedure (Talukdar 2015, Zhang 2016, Leeds 2017).

A major concern with POEM is the high rate of gastroesophageal reflux, which was observed in more than 50% of the patients undergoing the procedure despite the theoretical advantage of avoiding the esophagastric junction dissection required for the LHM. Other reported serious adverse events associated with POEM include mucosal injury, esophageal perforation, major bleeding, pneumothorax, subcutaneous emphysema, pleural effusion, and pneumoperitoneum (Akintoye 2016, Kahrilas 2017). Esophageal achalasia (EA) is a rare esophageal motility disorder characterized by loss of peristalsis of the esophageal body and failure of the lower esophageal sphincter (LES) to relax in response to swallowing. The most common form of EA is idiopathic and the exact etiology for the disappearance of myenteric neurons that coordinate esophageal peristalsis and relaxation of LES is unknown. Esophageal achalasia results in retention of food and saliva in the esophagus leading to difficulty in swallowing, regurgitation, aspiration, chest pain, weight loss, and eventually irreversible dilatation of the esophageal body (Kumagai 2015, Patel 2016, Zhang 2016).

EA is irreversible and all current therapeutic interventions are palliative with the aim of reducing the pressure at the esophagastric junction (EGJ), to facilitate the transit of food boluses into the stomach and reduce the related symptoms. Treatment options vary from pharmacotherapy (e.g., calcium channel antagonists and nitrates), botulinum toxin injection (BTI), endoscopic pneumatic dilatation (PD), surgical myotomy of the lower esophageal sphincter, to esophagostomy for end-stage achalasia. Each of the therapeutic modalities has its indications, advantages, and limitations. e.g., pharmacological therapy does not have a durable effect and may be only suitable for patients with mild disease, elderly patients or those who cannot undergo more invasive treatment; BTI has a short-lived action; PD is associated with symptom recurrence and post-procedure gastroesophageal reflux (GERD); and surgical myotomy usually requires and additional fundoplication procedure to prevent GERD (Talukdar 2015, Marano 2016, Zhang 2016).

Currently laparoscopic Heller myotomy (LHM) is the gold standard surgical treatment for patients with esophageal achalasia who are fit for surgery. It provides superior and long-lasting symptom relief compared to other treatment modalities including pneumatic dilatation of the esophagus. LHM involves full thickness myotomy along the distal 4-6 cm of the esophagus and extending to 2-3 cm on to the gastric wall allowing the LES to remain open. LMH is usually followed by partial anterior fundoplication (Dor fundoplication). The procedure is minimally invasive, yet the surgical access to the abdomen remains a potential source of wound infection, port-site hernia formation, and immediate postoperative pain (Wei 2015, Morano 2016, Zhang 2016, Sanaka 2017, Docimo 2017, Kahrilis 2017, Liu-Burdowski 2021).

Per-Oral Endoscopic Myotomy (POEM), was developed in Japan in 2008, and introduced into practice as a minimally invasive technique for the management of patients with achalasia. It is a complex procedure that requires training both in surgery and gastroenterology, good understanding of the pathophysiology of achalasia, esophageal manometry, very good knowledge of the anatomy of the mediastinum and upper abdomen, as well as endoscopic skills, judgment, and ability to manage the potential adverse events associated with the procedure. POEM involves the creation of a submucosal tunnel followed by myotomy of the circular muscle layer to reduce pressure at the LES. It is performed under general anesthesia and consists of five major steps: 1. Patient position and planning endoscopy, 2. Entry into the submucosal space, 3. Creation of a submucosal tunnel, 4. Endoscopic myotomy of the circular muscles, and 5. Closure of the mucosal entrance. Unlike LHM which involves complete division of both circular and longitudinal LES muscle layers, POEM only cuts the inner, circular LES muscles maintaining the integrity of the longitudinal muscles. Thus, POEM may have a potential advantage of performing both endoscopic dilatation and durable surgical myotomy in a single procedure (Talukdar 2015, Zhang 2016, Leeds 2017).

A major concern with POEM is the high rate of gastroesophageal reflux, which was observed in more than 50% of the patients undergoing the procedure despite the theoretical advantage of avoiding the esophagastric junction dissection required for the LHM. Other reported serious adverse events associated with POEM include mucosal injury, esophageal perforation, major bleeding, pneumothorax, subcutaneous emphysema, pleural effusion, and pneumoperitoneum (Akintoye 2016, Kahrilas 2017).

## Medical Technology Assessment Committee (MTAC)

# Peroral Endoscopic Myotomy 12/15/2014:

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Evidence Conclusion: Bhayani and colleagues compared the experience of 101 patients from a single institution undergoing either LHM or POEM. Swallowing outcomes at one and six months were assessed via objective measures (manometry and pH levels). In addition, the investigators collected information regarding operative time, complications and postoperative gastro-esophageal reflux disease (GERD). Manometry indicated that there were decreases in pressure across both groups, however, the postmyotomy resting pressures were higher for the POEM group than for LHMs (16 vs. 7 mm Hg, P=0.006). The same effect was not seen between groups for relaxation pressure (9 vs. 4). Both groups experienced relief of symptoms with the POEM group showing significantly lower Eckhardt scores when compared with the LHM group at one month (0.8 vs. 1.8, P<0.0001). At six months, however, the difference was no longer significant (1.7 vs. 1.2, P=0.1). Ultimately, the investigators conclude that POEM is comparable with LHM for safe and effective treatment of EA (Bhayani, Kurian et al. 2014). While POEM appears to be comparable to LHM, the technique is still evolving. At this particular point in time, the body of evidence only reports on the success of POEM in highly select populations with short-term follow-up. To add to this, the study is not randomized and relies on a small sample or subjects. Ultimately, the literature does not support the safety and effectiveness of POEM for the treatment of achalasia when compared to LHM. Conclusions: There is insufficient evidence to support the effectiveness of POEM compared to LHM for the treatment of EA. There is insufficient evidence to support the safety of POEM compared with LHM for the treatment of EA.

<u>Articles:</u> The literature search revealed over 200 studies relating to the use of POEM for the treatment of achalasia. The literature was dominated by publications that introduce and describe the technique as well as studies from individual centers describing their experience with POEM with short-term follow-up. A search of the clinicaltrials.gov website revealed several ongoing studies with the aim to evaluate of the clinical utility and safety of POEM (NCT01832779). For the purposes of this review, one of the larger and more recent nonrandomized comparison studies was identified for critical appraisal. The following articles were selected for critical appraisal: Bhayani NH, Kurian AA, Dunst CM, et al. A comparative study on comprehensive, objective outcomes of laparoscopic Heller myotomy with per-oral endoscopic myotomy (POEM) for achalasia. Annals of Surgery. 2014; 259(6): 1098-1103. See Evidence Table 1.

The use of Peroral Endoscopic Myotomy does not meet the *Kaiser Permanente Medical Technology Assessment Criteria.* 

### Peroral Endoscopic Myotomy

#### 12/18/2017

Evidence Conclusion: The literature search did not reveal any randomized controlled trials that compared POEM with laparoscopic Heller myotomy, the current standard of care; only noncompetitive case series and a small number of observational nonrandomized comparative studies and meta-analyses that pooled their results were identified. Meta-analyses of comparative studies: The published comparative studies identified by the search were relatively small observational studies that compared the outcomes of patients with esophageal achalasia treated POEM versus matched controls who had undergone treatment with LHM. The population sizes of the studies ranged from 8 patients to ~200 participants and there may be potential overlap between the studies published by the same groups of investigators. A number of systematic reviews with meta-analysis pooled the results of the majority of these studies three of which (Bhayani 2014, Ujiki 2013, and Hugeness 2013) were included in almost all meta-analyses. Based in the inclusion /exclusion criteria of the systematic reviews, smaller and/or studies with potentially overlapping population were added or excluded from the analyses. The overall pooled results of these comparative studies, none of which was randomized) as shown in Evidence Table 1, show no significant differences between the two procedures as regards their effect on reducing the achalasia symptoms as measured by the Eckardt score, perioperative pain score, complication rate, and length of hospital stay. POEM however, was associated with a significantly higher rate of symptomatic gastroesophageal reflux and esophagitis that required treatment. Based on these results some investigators concluded that the efficacy and safety of POEM appear to be comparable to those of LMH, and others (Wei and colleagues 2015) concluded that POEM achieves equivalent short-term outcomes compared to LHM. However, observational studies do not allow making any conclusion on the efficacy of POEM relative to LHM or other established treatments. The studies were only observational studies with potential bias and confounding. Patients were not randomly assigned the procedures, instead, POEM was compared to historical controls, the numbers of participants were small, with baseline differences in their characteristics, there were significant heterogeneity between the studies, and the follow-up duration was short, all of which limit generalization of the results. Large prospective randomized controlled trials with long-term outcomes are needed to determine the relative safety and efficacy of POEM and LHM. Schlottmann and colleagues', 2017 systematic review and meta-analysis (Evidence Table 2) compared outcomes of POEM performed among different patient cohorts along the years (total N=1,958) versus LHM performed among a total of 5.834 participants. The studies included were not comparative: instead, the authors pooled the results of case series for each procedure and compared the overall summary results. This indirect © 2014 Kaiser Foundation Health Plan of Washington. All Rights Reserved. Back to Top

#### Criteria | Codes | Revision History

comparison suggests that POEM may be more effective than LHM in reducing dysphagia symptoms in the shortterm but is associated with a significantly higher incidence of pathologic reflux. These, similar to the results of other case series and nonrandomized studies, have to be interpreted with caution. Non-comparative studies: A large number of prospective and retrospective case series reported on the outcomes of the POEM procedure used for the management of patients with esophageal achalasia. The majority of the studies were conducted in Asia and included a small number of participants (<10-100 participants in each study). Only two case series included a little over 200 patients, and the largest reported on 500 consecutive patients treated in one center in Japan (Inoue 2015). In addition to these differences, other variations between the studies included differences in the patient characteristics, date and period the procedures were performed, technique used, length of myotomy, treatment success and other outcome measures, duration of follow-up, as well as other differences. A number of systematic review performing quantitative and qualitative analysis of the published case series were identified by the literature search (Barbieri 2015; Akintove, 2016; and Crespin 2016). Akintove and colleagues' 2016 metaanalysis that was more comprehensive and more inclusive was selected for critical appraisal. Akintove et al. 2016 meta-analysis (Evidence Table 3) had generally valid methodology; however, a meta-analysis is as good as the studies it includes. All were case series subject to selection and observation bias. There was significant heterogeneity between the studies that were published over a span of 4 years and reported on outcomes of POEMs performed in different countries between 2008 and 2014. The studies varied in population sizes, many were retrospective, and had short and variable follow-up durations. According to the pooled results, a higher success rate was observed in Asian countries where the procedure had been introduced into practice earlier allowing for more development in its technique and acquisition of more skills by the interventionists. In addition, the outcomes of the studies were reported after variable follow-up durations and some e.g. symptoms relief, symptomatic gastroesophageal reflux, and esophagitis may be time dependent. Overall, the pooled results of the Akintoye's meta-analysis as well as the non-comparative case series and their pooled results suggest that POEM may be effective in reducing dysphagia symptoms in the short-term among patients with esophageal achalasia. The POEM procedure, however, is associated with a high rate of symptomatic gastroesophageal reflux. esophagitis, and abnormal acid exposure. Reported perioperative adverse events of the procedure include mucosal injury, subcutaneous emphysema, pneumoperitoneum, and other serious events that occurred at a lower rate.

#### Conclusions

- The published literature is insufficient to determine the effects of POEM on the net health outcomes of
  patients with esophageal achalasia. The studies published to date, provide weak evidence on the short-term
  efficacy of POEM in reducing dysphagia symptoms in patients with esophageal achalasia, but on the expense
  of an increased rate of symptomatic gastroesophageal reflux and esophagitis.
- There is insufficient evidence to determine the long-term efficacy and safety of POEM for the management of
  patient with esophageal achalasia.
- The lack of randomized controlled trials, the small number of nonrandomized observational studies, design and quality of studies, short duration of follow-up, and significant variations between the studies in the surgical techniques and learning curve, operative time, definitions and reporting of the procedural success and adverse events, do not allow supporting the use of POEM as an alternative to LHM 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 compared to other established procedures.
- Several RCTs comparing POEM to other established procedures is ongoing and may provide more evidence on its long-term safety and efficacy. Among these are the following:
  - Endoscopic Versus Laparoscopic Myotomy for Treatment of Idiopathic Achalasia: A Randomized, Controlled Trial: ClinicalTrials.gov Identifier: NCT01601678
  - Multi-center Study Comparing Endoscopic Pneumodilation and Peroral Endoscopic Myotomy (POEM). ClinicalTrials.gov Identifier: NCT01793922
  - Laparoscopy Heller Myotomy with Fundoplication Associated Versus Peroral Endoscopic Myotomy (POEM). ClinicalTrials.gov Identifier: NCT02138643

<u>Articles:</u> The literature search for recently published studies after the last MTAC review did not identify any randomized controlled trials that compared POEM with laparoscopic Heller myotomy or other standard treatments options. The published literature consisted of case series, non-randomized comparative studies, and a number of systematic reviews with quantitative meta-analyses (MAs) that pooled the results the published case series and/or nonrandomized comparative observational studies. Among these systematic reviews and meta-analyses were Barbieri, 2015, Talukdar 2015, Wei 2015, Akintoye 2016, Marano 2016, Patel 2016, Zhang 2016, Crespin 2017, Repici 2017, Schlottmann 2017, and Khan 2017. The latter examined the safety and efficacy of POEM for spastic esophageal disorders in general and was excluded from current review.

#### Peroral Endoscopic Myotomy

#### 12/18/2017

#### **Evidence Conclusion:**

- 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 RCT 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 patient 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

**<u>Articles:</u>** The literature search for studies published after the 2017 review conducted for MTAC identified only one RCT that compared POEM versus laparoscopic surgical myotomy (Werner et al, 2019) and another that compared it with pneumatic dilatation (Ponds et al, 2019). The search also identified several prospective or retrospective observational studies and more than 10 systematic reviews (SRs) with or without aggregate data meta-analyses or network meta-analysis that pooled the results the published observational studies comparing POEM to other therapies used for the management of achalasia. There was a major overlap in the studies included in the systematic reviews. The RCT comparing POEM to surgical myotomy (Werner et al, 2019) was selected for critical appraisal, as well as a recent relevant, peer reviewed, and inclusive SR (Park et al, 2019) with valid methodology and analysis. The only other published RCT (Ponds et al, 2019) evaluating POEM compared to PD was briefly summarized.

The use of Peroral Endoscopic Myotomy does not meet the *Kaiser Permanente Medical Technology Assessment Criteria.* 

# Peroral Endoscopic Myotomy 10/10/2022

#### Evidence Conclusion:

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- 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 patient 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

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- Park CH, Jung DH, Kim DH, er al for the Achalasia Research Group of the Korean Society of Neurogastroenterology and Motility. Comparative efficacy of per-oral endoscopic myotomy and Heller myotomy in patients with achalasia: a meta-analysis. *Gastrointest Endosc.* 2019 Oct;90(4):546-558.
- Ponds FA, Fockens P, Lei A, et al. Effect of Peroral Endoscopic Myotomy vs Pneumatic Dilation on Symptom Severity and Treatment Outcomes Among Treatment-Naive Patients with Achalasia: A Randomized Clinical Trial. JAMA. 2019;322(2):134-144. doi:
- Werner YB, Hakanson B, Martinek J, et al. Endoscopic or surgical myotomy in patients with idiopathic achalasia. *N Engl J Med*. 2019;381:2219–2229

## Hayes Technology Assessment

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 PD, with the therapeutic goal of a surgical myotomy, such as 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.

#### 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 longerterm outcomes.

**Hayes Rating: C**—For use of peroral endoscopic myotomy (POEM) as an alternative to laparoscopic Heller myotomy (LHM) for the treatment of adult patients with esophageal achalasia (EA). **C**—For use of POEM as an alternative to pneumatic dilation (PD) for the treatment of adult patients with EA.

Hayes. Hayes Technology Assessment. *Peroral Endoscopic Myotomy for Treatment of Esophageal Achalasia.* Dallas, TX: Hayes; December 03, 2019. Retrieved February 21, 2023, from https://evidence.hayesinc.com/report/dir.peroral3346

## References

- Ahmed Y, Othman MO. Peroral endoscopic myotomy (POEM) for achalasia. J Thorac Dis. 2019 Aug;11(Suppl 12):S1618-S1628. doi: 10.21037/jtd.2019.07.84. PMID: 31489229; PMCID: PMC6702399.
- X. Tang, W. Gong, Z. Deng, J. Zhou, Y. Ren, Q. Zhang, Z. Chen, B. Jiang, Feasibility and safety of peroral endoscopic myotomy for achalasia after failed endoscopic interventions, *Diseases of the Esophagus*, Volume 30, Issue 3, March 2017, Pages 1–6, <u>https://doi.org/10.1111/dote.12457</u>

## **Applicable Codes**

Considered Medically Necessary when criteria in the applicable policy statements listed above are met

CPT <sup>®</sup> or	Description
HCPC	
Codes	
43497	Lower esophageal myotomy, transoral (ie, peroral endoscopic myotomy [POEM])

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\*Note: Codes may not be all-inclusive. Deleted codes and codes not in effect at the time of service may not be covered.

\*\*To verify authorization requirements for a specific code by plan type, please use the Pre-authorization Code Check.

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Date Created	Date Reviewed	Date Last Revised
12/29/2014	01/06/2015 <sup>MPC</sup> , 12/01/2015 <sup>MPC</sup> , 10/04/2016 <sup>MPC</sup> , 08/01/2017 <sup>MPC</sup> , 07/10/2018 <sup>MPC</sup> , 07/09/2019 <sup>MPC</sup> , 07/07/2020 <sup>MPC</sup> , 07/06/2021 <sup>MPC</sup> , 07/05/2022 <sup>MPC</sup> , 07/11/2023 <sup>MPC</sup> , 08/06/2024 <sup>MPC</sup>	02/07/2023

MPC Medical Policy Committee

Revision History	Description
02/06/2018	Added MTAC review for Per-Oral Endoscopic Myotomy (POEM) for Esophageal Achalasia
07/19/2018	Added coverage language – In the absence of direction for CMS Kaiser Permanente criteria will
	be used
12/08/2022	Added new applicable CPT code to criteria
01/03/2023	Added MTAC review for Per-Oral Endoscopic Myotomy (POEM) for Esophageal Achalasia
02/07/2023	MPC adopted new clinical criteria for Per-Oral Endoscopic Myotomy (POEM) for Esophageal
	Achalasia. Requires 60-Day notice. Effective 07/01/2023. Added October 2022 MTAC review.