Medical Policy

Blue Cross Blue Shield Blue Care Network of Michigan

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***Current Policy Effective Date: 5/1/25**
(See policy history boxes for previous effective dates)

Title: Defecography/Proctography

Description/Background

Defecography, also known as evacuation proctography, is an imaging test that visualizes the rectum and anal canal, using contrast material, during defecation (emptying of the bowel). This test is used to diagnose structural and functional abnormalities that impair defecation.

The procedure begins the night before when the patient is instructed to fast and then perform a cleansing enema a few hours prior to the scheduled procedure. Prior to the examination, the patient ingests a barium solution in order to opacify the pelvic loops of the small bowel. The patient is then placed in the left side-lying position and thick barium paste, the consistency of stool, is inserted into the rectum. In female patients, the vagina is also opacified using barium paste. The patient is then positioned on a special commode and defecates while a sequence of radiographs is taken to capture the process of defecation. The important phases to capture are[5]:

1. At rest when the anal bulb is filled;
2. At the point of maximum contraction of the anal sphincter and pelvic floor muscles;
3. While straining without evacuation; AND
4. At rest when evacuation is completed

Defecography can also be performed with magnetic resonance imaging (MRI), which is also known as dynamic magnetic resonance imaging of defecation or MR Defecography. There is interest in this technique as it avoids the use of radiation and may provide better imaging of structural and functional abnormalities in some instances. However, the MRI can only be performed in the supine position, which is not ideal, as this is not the normal position for defecation. It has been proposed for the evaluation of rectal prolapse, rectal intussusception, and other pelvic floor disorders.

Regulatory Status

N/A

Medical Policy Statement

The safety and effectiveness of conventional (fluoroscopic) defecography have been established. It may be a useful diagnostic tool in specified situations.

Dynamic magnetic resonance imaging defecography (MR Defecography) may be considered an appropriate diagnostic option when conventional testing, including conventional defecography, has not yielded a diagnosis or a rationale is provided to support MR defecography rather than fluoroscopic defecography, in order to yield a diagnosis and treatment that otherwise would not be attainable.

Inclusionary and Exclusionary Guidelines

Inclusions:
Conventional (fluoroscopic) defecography may be a useful diagnostic tool when:

1. There is a history of chronic constipation AND
2. The results of anorectal manometry and rectal balloon expulsion are inconclusive; AND
3. When any of the following disorders are the suspected cause of impaired defecation:
   - Anterior rectocele (e.g., history of manipulation of the rectal wall per vagina).
   - Enterocele (e.g., after hysterectomy).
   - Pelvic floor dyssynergia (inappropriate contraction of the puborectalis muscle).
   - Intussusception
4. Dynamic magnetic resonance imaging defecography (MR Defecography) may be considered an appropriate diagnostic option when conventional testing, including conventional defecography, has not yielded a diagnosis, or a rationale is provided to support MR defecography rather than fluoroscopic defecography, in order to yield a diagnosis and treatment that otherwise would not be attainable.

Exclusions:

- Use of conventional or MR Defecography for the routine evaluation of constipation.
- All other situations not specified under the inclusions.

CPT/HCPCS Level II Codes *(Note: The inclusion of a code in this list is not a guarantee of coverage. Please refer to the medical policy statement to determine the status of a given procedure.)*

Established codes:

76499

Other codes (investigational, not medically necessary, etc.):

N/A

Rationale

Conventional Defecography (CD)
According to the American Gastroenterological Association, defecography has potential value in patients with constipation in whom the following problems are suspected as the cause of impaired defecation: pelvic floor dyssynergia (inappropriate contraction of the puborectalis muscle), enterocele (e.g., after hysterectomy), and anterior rectocele (e.g., history of manipulation of the rectal wall per vagina)."[2]

In a technical review on constipation by the American Gastroenterological Association, defecography is especially useful when the results of anorectal testing are inconsistent with the clinical impression and/or to identify anatomic abnormalities.[3] Furthermore, a 2013 AGA medical position statement on constipation states that, defecography should not be performed before anorectal manometry and a rectal balloon expulsion test. Defecography should be considered when results of anorectal manometry and rectal balloon expulsion are inconclusive.[1]

In a guideline published by the American Society of Colon and Rectal Surgeons (ASCRS), defecography may be the most useful diagnostic technique for identifying internal rectal intussusception. It can help detect structural causes, such as intussusception, rectocele with retained stool, pelvic dyssynergia, and extent of rectal emptying. It has been shown to have good interobserver agreement for enterocele and rectocele and fair-to-moderate interobserver agreement for intussusception and anismus.[7]

Magnetic Resonance Imaging Defecography
Cappabianca et al (2011) compared the diagnostic efficacy of dynamic MR defecography (MR-D) with entero-colpo-cysto-defecography (ECCD) in the assessment of midline pelvic floor hernias (MPH) in female pelvic floor disorders.[4] From August 2004 to August 2010, a total of 3,006 female patients who required ECCD for the evaluation of pelvic floor disorders were enrolled in this study. All 1,160 patients with ECCD findings of MPH were asked to undergo MR-D and 1,142 accepted. Overall, the prevalence of MPH with ECCD was higher if compared with that of MR-D. There were significantly more enteroceles and sigmoidoceles observed with ECCD than MR-D, but, in relation to the hernia development, the prevalence of elytroceles, edroceles, and Douglas' hernias with ECCD was significantly higher than with MR-D. In spite of a 100% specificity, the sensitivity of MR-D in the detection of an omentocele, sigmoidocele, and enterocele was, respectively, 95%, 82%, and 65%, which was inferior in diagnostic capacity compared to ECCD. The authors concluded that MR-D has lower sensitivity than ECCD in the detection of MPH development, but may have a role in a better assessment of the entire pelvic anatomy and pelvic organ interaction especially in patients with multi-compartmental defects.

Foti et al (2013) reported on a small prospective study comparing magnetic resonance (MR) imaging with conventional defecography (CD) in outlet obstruction syndrome.[6] Nineteen patients with clinical symptoms of outlet obstruction underwent a pelvic MR examination. Comparison between CD and MR with evacuation phase (MRWEP) showed no significant differences in sphincter hypotonia, dyssynergia, rectocele or rectal prolapse. However,

significant differences were seen in descending perineum. Comparison between CD and MR without evacuation phase (MRWOEP) showed no significant differences in sphincter hypotonia, dyssynergia or enterocele. However, significant differences were found in rectocele, rectal prolapse and descending perineum. Comparison between MRWEP and MRWOEP showed no significant differences in sphincter hypotonia, dyssynergia, enterocele or descending perineum, however significant differences were found in rectocele, rectal prolapse, peritoneocele, cervical cystoptosis and hysteroptosis. The authors concluded that while MR imaging provides morphological and functional study of pelvic floor structures and may offer an imaging tool complementary to CD in multicompartment evaluation of the pelvis, it cannot replace CD for detecting conditions such as descending perineum and entererocele.

Vitton et al (2011) reported results of a prospective study comparing the accuracy of dynamic anorectal endosonography and dynamic MRI defecography with conventional defecography in the diagnosis of pelvic floor disorders.[8] A prospective crossover design was used. The study included 56 female patients with dyschezia. Dynamic anorectal endosonography (DAE) and dynamic MRI defecography were found to have similar accuracy in assessing pelvic floor disorders such as rectocele, perineal descent, and enterocele when compared to conventional defecography. Conventional defecography detected more rectoceles, perineal descents and enteroceles than DAE or MRI defecography. However, both DAE and MRI showed good positive predictive value and specificity. Both DAE and dynamic MRI defecography had higher diagnostic concordance with conventional defecography for the assessment of rectocele than for perineal descent and enterocele. The authors suggest this may be due to the supine position during DAE and dynamic MRI.

Van Lersel et al (2016) compared the diagnostic capabilities of dynamic magnetic resonance defecography (D-MRI) with conventional defecography in patients with symptoms of prolapsed of the posterior compartment of the pelvic floor. Forty-five consecutive patients underwent CD and D-MRI. Outcome measures were the presence or absence of rectocele, enterocele, intussusception, rectal prolapse and the descent of the anorectal junction on straining measured in millimetres. Cohen's Kappa, sensitivity, specificity, positive (PPV) and negative predictive value (NPV) and the positive and negative likelihood ratio of D-MRI were compared with CD. Cohen's Kappa and Pearson's correlation coefficient were calculated and regression analysis was performed to determine interobserver agreement. Forty-one patients were available for analysis. D-MRI underreported rectocele formation with a difference in prevalence (CD 77.8% vs. D-MRI 55.6%), mean protrusion (26.4 vs. 22.7 mm, p=0.039) and 11 false negative results, giving a low sensitivity of 0.62 and an NPV of 0.31. For the diagnosis of enterocele, D-MRI was inferior to CD with five false negative results, giving a low sensitivity of 0.17 and high specificity (1.0) and PPV (1.0). Nine false positive intussusceptions were seen on D-MRI with only two missed. The authors concluded that the diagnostic accuracy of D-MRI for diagnosing rectocele and enterocele is less than conventional defecography. D-MRI, however, appears superior to CD in identifying intussusception. D-MRI and CD are complementary imaging techniques in the evaluation of patients with symptoms of prolapsed of the posterior compartment.[11]

Martin-Martin et al (2017) evaluated the diagnostic accuracy of magnetic resonance defecography and compared it with video defecography in the evaluation of obstructed defecation syndrome.[12] Forty patients underwent a clinical examination, video defecography, and MR defecography in the supine position. The degree of agreement between the two tests was as follows: almost perfect for anismus ($\kappa = 0.88$) and rectal prolapse ($\kappa = 0.83$), substantial

for enterocele (κ = 0.80) and rectocele grade III (κ = 0.65), moderate for intussusception (κ = 0.50) and rectocele grade II (κ = 0.49), and slight for rectocele grade I (κ = 0.30) and excessive perineal descent (κ = 0.22). Eighteen cystoceles and 11 colpoceles were diagnosed only by MR defecography. Most patients (54%) stated that video defecography was the more uncomfortable test.

Neshatian et al (2024) conducted a retrospective analysis of a registry of patients with defecatory disorders with high-resolution anorectal manometry and magnetic resonance defecography was performed.[13] Association of risk factors on increasing RI grades was assessed using logistic regression. Analysis included a total of 238 women: 90 had no RI, 43 Oxford 1-2, 49 Oxford 3, and 56 Oxford 4-5. Age (P = 0.017), vaginal delivery (P = 0.008), and prior pelvic surgery (P = 0.032) were associated with increased Oxford grades. Obstructive defecation symptoms and dyssynergic defecation were observed at relatively high rates across groups. Increased RI grades were associated with less anal relaxation at simulated defecation yet, higher rates of normal balloon expulsion (P < 0.05), linked to diminished anal sphincter. Indeed, increased RI grades were associated with worsening fecal incontinence severity, attributed to higher rates of anal hypotension. Levator ani laxity, defined by increased levator hiatus length and its excessive descent at straining, was associated with increasing RI grades, independent of age, history of vaginal delivery, and pelvic surgeries and could independently predict increased RI grades. Concurrent anterior and posterior compartments, and visceral prolapse were associated with higher Oxford grades.

Summary of Evidence
There is insufficient evidence in the published peer-reviewed medical literature to support the use of MRI defecography over conventional defecography. Additional studies are needed to determine patient selection criteria and to establish how MR defecography improves health outcomes over conventional defecography. However, in specified situations, MR defecography may be useful in those circumstances wherein a definitive diagnosis and treatment plan cannot be established following conventional testing.

Government Regulations
National:
There is no national coverage policy on this topic.

Local:
There is no local coverage policy on this topic.

The current Physician Fee Schedule does not price the following code 76499.

(The above Medicare information is current as of the review date for this policy. However, the coverage issues and policies maintained by the Centers for Medicare & Medicare Services [CMS, formerly HCFA] are updated and/or revised periodically. Therefore, the most current CMS information may not be contained in this document. For the most current information, the reader should contact an official Medicare source.)

Related Policies

- Biofeedback
- Injectable Bulking Agents for the Treatment of Urinary and Fecal Incontinence
- Ingestible Capsule for Assessment of Gastrointestinal (Motility) Disorders

- Sacral Nerve Neuromodulation/Stimulation
- Transanal Radiofrequency for Fecal Incontinence

References

1. American Gastroenterological Association (AGA) Medical Position Statement on Anorectal Testing Techniques.1999. Reviewed December 2015, no updates to document.
2. American Gastroenterological Association (AGA), American Gastroenterological Association Medical Position Statement on Constipation. Gastroenterology, 2013, Vol. 144, No. 1, pp. 211-17. Available at: http://www.gastrojournal.org/article/S0016-5085(12)01545-4/pdf Accessed December 2024.
3. Bharucha AE, et al. "American Gastroenterological Association technical review on constipation," Gastroenterology, 2013, Vol. 144, No. 1, pp. 218-38.
4. Cappabianca, R. et al. "Dynamic MRI defecography vs. entero-colpo-cysto-defecography in the evaluation of midline pelvic floor hernias in female pelvic floor disorders," Int J Colorectal Dis, 2011, Vol. 26, No. 9, pp. 1191-1196.
5. Faccioli, N. et al., "Defecography: a practical approach," Diagn Interv Radiol, 2010, Vol. 16, pp. 209-16.
6. Foti PV, et al. "Pelvic floor imaging: comparison between magnetic resonance imaging and conventional defecography in studying outlet obstruction syndrome," Abdominal Radiology, 2013, Vol. 118, No. 1, pp. 23-39.
7. Ternent CA, et al. "Standards Practice Task Force of the American Society of Colon and Rectal Surgeons. Practice parameters for the evaluation and management of constipation," Dis Colon Rectum, 2007, Vol. 50, No. 12, pp. 2013-22.
8. Vitton V, et al. "Dynamic anal endosonography and MRI defecography in diagnosis of pelvic floor disorders: comparison with conventional defecography," Diseases of the colon & Rectum, 2011, Vol. 54, No. 1, pp. 1398-1404.
9. Reginelli A, Grezia G, Gatta G, et al. Role of conventional radiology and MRI defecography of pelvic floor hernias. BMC Surgery. 2013; 13(2):S53.
10. Kassis N, Wo J, et al. Balloon expulsion testing for the diagnosis of dyssynergic defecation in women with chronic constipation. Int Urogynecol J. 2015; 26(9): 1385-1390.
11. Van Lersel JJ, Formijne J, Verheijen PM, et al. Comparison of dynamic magnetic resonance defecography with rectal contrast and conventional defecography for posterior pelvic floor compartment prolapsed. Colorectal Dis. 2016; [Epub ahead of print].
12. Martin-Martin GP, Garcia J, Roiq-Vila JV, et al. Magnetic resonance defecography vs. video defecography in the study of obstructed defecation syndrome: is video defecography still the test of choice after 50 years? Tech Coloproctol. 2017; [Epub ahead of print]
13. Neshatian L, Triadafilopoulous G, Wallace S, et al. Increased grades of rectal intussusception: role of decline in pelvic floor integrity and association with dyssynergic defecation. Am J. Gastroenterol. May 2024; 119(5): 946-956.

The articles reviewed in this research include those obtained in an Internet based literature search for relevant medical references through January 2025, the date the research was completed.

Joint BCBSM/BCN Medical Policy History

Policy Effective Date	BCBSM Signature Date	BCN Signature Date	Comments
5/1/15	2/17/15	2/27/15	Joint policy established
5/1/16	2/16/16	2/16/16	Routine maintenance. Updated references. No change in policy status.
5/1/17	2/21/17	2/21/17	Routine policy maintenance. Updated rationale and added reference #11.
5/1/18	2/20/18	2/20/18	Routine policy maintenance. Updated rationale and added reference #12. No change in policy status.
5/1/19	2/19/19		Routine policy maintenance. No change in policy status.
5/1/20	2/18/20		Routine policy maintenance. No change in policy status.
5/1/21	2/16/21		Routine policy maintenance. No change in policy status.
5/1/22	2/15/22		Routine policy maintenance, no change in policy status.
5/1/23	2/21/23		Routine policy maintenance, no change in policy status. (ds)
5/1/24	2/20/24		Routine policy maintenance, no change in policy status. Vendor managed: N/A (ds)
5/1/25	2/18/25		Rationale updated added reference #13. No change in policy status. Vendor managed: N/A (ds)

Next Review Date: 1st Qtr. 2026

BLUE CARE NETWORK BENEFIT COVERAGE POLICY: DEFECOGRAPHY/PROCTOGRAPHY

I. Coverage Determination:

Commercial HMO (includes Self-Funded groups unless otherwise specified)	Covered; criteria apply
BCNA (Medicare Advantage)	See government section
BCN65 (Medicare Complementary)	Coinsurance covered if primary Medicare covers the service.

II. Administrative Guidelines:

- The member's contract must be active at the time the service is rendered.
- Coverage is based on each member's certificate and is not guaranteed. Please consult the individual member's certificate for details. Additional information regarding coverage or benefits may also be obtained through customer or provider inquiry services at BCN.
- The service must be authorized by the member's PCP except for Self-Referral Option (SRO) members seeking Tier 2 coverage.
- Services must be performed by a BCN-contracted provider, if available, except for Self-Referral Option (SRO) members seeking Tier 2 coverage.
- Payment is based on BCN payment rules, individual certificate and certificate riders.
- Appropriate copayments will apply. Refer to certificate and applicable riders for detailed information.
- CPT - HCPCS codes are used for descriptive purposes only and are not a guarantee of coverage.