Drug Monograph

Drug Name: **Sutab® (sodium sulfate/potassium chloride/magnesium sulfate) tablet**
Drug Class: **Osmotic Laxative, Bowel Cleansing Preparation**
Prepared For: MO HealthNet
Prepared By: Conduent

☒ **New Criteria** ☐ **Revision of Existing Criteria**

Executive Summary

Purpose:	The purpose of this monograph is to provide a review of new therapy to determine whether the reviewed drug should be made available on an open access basis to prescribers, require a clinical edit or require prior authorization for use.
Dosage Forms:	Sutab is available as a kit with 24 tablets of 1.479 g of sodium sulfate, 0.255 g of potassium chloride, and 0.188 g of magnesium sulfate.
Manufacturer:	Manufactured by: Braintree Laboratories, Inc., Holbrook, MA 02343.
Summary of Findings:	The safety and efficacy of Sutab were established in two randomized, multicenter, single-blind, active-controlled trials with 548 and 388 adults, respectively. The primary efficacy endpoint in both studies was the proportion of patients with successful colon cleansing, as assessed by the blinded colonoscopist utilizing a four-point scale (1=poor, 4=excellent). Success was defined as an overall cleansing assessment of 3 (good) or 4. The difference in the primary endpoint between Sutab and comparator in Study 1 was 3.0% (99% CI: -3.2, 9.3) and in Study 2 was 3.1% (99% CI: -4.5, 10.7). Sutab was non-inferior to the comparator in both studies based on the primary endpoint analysis.

Status Recommendation:	☐ Clinical Edit ☐ Open Access	☒ Fiscal Edit ☐ PDL
Type of PA Criteria:	☒ Appropriate Indications ☐ No PA Required	☐ Non-Preferred ☐ Preferred

Purpose

The purpose of this monograph is to provide a review of new therapy to determine whether the reviewed drug should be considered a prior authorization drug, a clinical edit drug or an open access drug. While prescription expenditures are increasing at double-digit rates, payers are evaluating ways to control these costs by influencing prescriber behavior and guide appropriate medication usage. This review will assist in the achievement of qualitative and economic goals related to health care resource utilization. Restricting the use of certain medications can reduce costs by requiring documentation of appropriate indications for use, and where appropriate, encourage the use of less expensive agents within a drug class.

Introduction [1,2]

Colonoscopy is a procedure which enables a gastroenterologist to directly image and examine the entire colon. It is effective in the diagnosis and/or evaluation of various gastrointestinal (GI) disorders such as colon polyps, colon cancer, diverticulosis, inflammatory bowel disease, bleeding, change in bowel habits, abdominal pain, obstruction and abnormal x-rays or CT scans. A key advantage of this technique is that it can simultaneously be used to provide therapy (e.g., removal of polyps or control of bleeding). If a patient has no colorectal symptoms, no family history of colon cancer, polyps or inflammatory bowel disease, the first colonoscopy is recommended at age 50. If one or more first degree relatives has had a precancerous polyp or colon cancer, the general guideline is to begin using colonoscopy for screening 10 years younger than the youngest age of the relative with colon cancer, or at age 40, whichever is younger. For patients with ulcerative colitis involving the entire colon and patients with Crohn's disease, screening for colon cancer should begin 8 to 10 years after initial diagnosis is made. Lifetime risk of developing colon cancer if living in the U.S. is approximately 6% but roughly doubles if one first degree relative had colon cancer or polyps after age 50 and is higher if the cancer or polyps were diagnosed at a younger age or if more members of the family are affected. Each year in the U.S., there are more than 15 million colonoscopies are performed, but many individuals may delay or deny routine screening. The most common reason patients cite for not getting a colonoscopy is that their doctor did not discuss it with them, but the next most common reason is fear or avoidance of the preparation or bowel cleansing.

Dosage Form [3]

Sutab is available as a kit with 24 tablets of 1.479 g of sodium sulfate, 0.255 g of potassium chloride, and 0.188 g of magnesium sulfate.

Manufacturer [3]

Manufactured by: Braintree Laboratories, Inc., Holbrook, MA 02343.

Indication(s) [3]

Sutab is indicated for the cleansing of the colon as a preparation for colonoscopy in adults.

Clinical Efficacy [3,4,5,6] (mechanism of action/pharmacology, comparative efficacy)

The primary mode of action is the osmotic action of sodium sulfate and magnesium sulfate, which induce a laxative effect. The physiological consequence is increased water retention in the lumen of the colon, resulting in loose stools.

Pharmacokinetics:

Absorption	Poor
Metabolism	NA
Excretion	Fecal
Half-life	NA

Clinical Trials Experience:

STUDY DESIGN	Two randomized, single-blind, active-controlled, multicenter trials (NCT 03404401; N=548 and NCT 03261960; N=388)
INCLUSION CRITERIA	• Male or female outpatients who are undergoing colonoscopy for a routinely accepted indication • 18 to 85 years of age • If female and of child-bearing potential, using an acceptable form of birth control • Negative serum pregnancy test at screening if applicable
EXCLUSION CRITERIA	• Subjects with known or suspected ileus, gastrointestinal obstruction, gastroparesis, gastric retention, bowel perforation, toxic colitis or megacolon • Subjects with ongoing severe, acute inflammatory bowel disease • Subjects who had previous significant gastrointestinal surgeries • Subjects with uncontrolled pre-existing electrolyte abnormalities, or those with clinically significant electrolyte abnormalities based on Visit 1 laboratory results • Subjects taking diuretics, anti-hypertensive medications, including angiotensin converting enzyme (ACE) inhibitors and Angiotensin II receptor blockers (ARBs), or chronic NSAIDs, that have not been stable for 30 days • Subjects with uncontrolled hypertension (systolic blood pressure >170 mmHg and diastolic blood pressure >100 mmHg) • Subjects taking antibiotics within 7 days of colonoscopy • Subjects with severe renal insufficiency (GFR <30 mL/min/1.73m^2) • Subjects with known severe hepatic insufficiency (Child Pugh C) • Subjects with cardiac insufficiency (NYHA Functional Classifications 3 or 4) • Subjects with an abnormal and clinically significant physical examination or ECG finding at Visit 1 • Subjects undergoing insulin therapy for any indication • Subjects with impaired consciousness that predisposes them to pulmonary aspiration • Subjects undergoing colonoscopy for foreign body removal and/or decompression • Subjects who are pregnant or lactating, or intending to become pregnant during the study • Subjects of childbearing potential who refuse a pregnancy test • Subjects allergic to any preparation component • Subjects using drugs of abuse, including abused prescription medications

<table>
<tr><td></td><td>

Subjects who are withdrawing from alcohol or benzodiazepines
Subjects who, in the opinion of the Investigator, should not be included in the study for any reason, including inability to follow study procedures
Subjects who have participated in an investigational surgical, drug, or device study within the past 30 days

</td></tr>
<tr><td>TREATMENT REGIMEN</td><td>In Study 1, patients were randomized to one of the following two colon preparation regimens: Sutab or polyethylene glycol 3350, sodium sulfate, sodium chloride, potassium chloride, ascorbic acid and sodium ascorbate for oral solution. Both regimens were administered according to a split-dose regimen.
In Study 2, patients were randomized to one of the following two colon preparation regimens: Sutab or sodium picosulfate, magnesium oxide, and anhydrous citric acid for oral solution. Both regimens were administered according to a split-dose regimen.</td></tr>
<tr><td>RESULTS</td><td>The primary efficacy endpoint in both studies was the proportion of patients with successful colon cleansing, as assessed by the blinded colonoscopist utilizing a four-point scale (1=poor, 4=excellent). Success was defined as an overall cleansing assessment of 3 (good) or 4.
<table>
<tr><td rowspan="2"></td><td rowspan="2">Sutab
% (n/N)</td><td rowspan="2">Comparator
% (n/N)</td><td colspan="2">Sutab-comparator</td></tr>
<tr><td>Difference (%)</td><td>99% CI</td></tr>
<tr><td>Study 1</td><td>92
(257/278)</td><td>89
(241/270)</td><td>3.0</td><td>(-3.2, 9.3)</td></tr>
<tr><td>Study 2</td><td>92
(175/190)</td><td>88
(174/198)</td><td>3.1</td><td>(-4.5, 10.7)</td></tr>
</table>
Sutab was non-inferior to the comparator in both studies based on the primary endpoint analysis.</td></tr>
<tr><td>SAFETY</td><td>Discussed in the Adverse Effects section below.</td></tr>
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Contraindications [3,4]

- Gastrointestinal obstruction or ileus
- Bowel perforation
- Toxic colitis or toxic megacolon
- Gastric retention

Warnings and Precautions [3,4]

- Serious fluid and electrolyte abnormalities need to be corrected prior to using Sutab; using bowel preparations products may result in significant vomiting or signs of dehydration
- Cardiac arrhythmias rarely reported with use of ionic osmotic laxative products
- Seizures associated with electrolyte abnormalities and low serum osmolality have been reported with bowel preparation products; caution using Sutab in patients with increased risk of seizures
- Patients with risk of renal injury or currently taking medication that may affect renal function; advise the importance of adequate hydration

- Colonic mucosal ulcerations and ischemic colitis have been reported with the use of osmotic laxatives
- Significant gastrointestinal disease needs to be ruled out if suspected prior to using Sutab
- No available data on the use of Sutab in pregnant or breast-feeding women

Adverse Effects [3,4]

Most common	Study 1		Study 2	
	Sutab (%)	PEG 3350 with electrolytes and ascorbic acid (%)	Sutab (%)	Sodium picosulfate, MgSO4, and anhydrous citric acid (%)
Nausea	48	26	52	18
Abdominal distention	29	22	34	15
Vomiting	23	5	16	2
Upper abdominal pain	16	18	23	13

Drug Interactions [3,4]

- Drugs that may increase risks of fluid and electrolyte abnormalities
- Sutab can reduce the absorption of other co-administered drugs
- Stimulant laxatives-may increase the risk of mucosal ulceration or ischemic colitis

Dosage and Administration [3,4]

The evening before the colonoscopy: 12 tablets orally along with 16 ounces of water, ingested over 15 to 20 minutes. Approximately 1 hour after the last tablet is ingested, the patient must drink another 16 ounces of water over 30 minutes. Approximately 30 minutes after finishing the second container of water, the patient must drink another 16 ounces of water over 30 minutes.

On the day of the colonoscopy (5 to 8 hours before the procedure and no sooner than 4 hours from starting Dose 1): 12 tablets orally along with 16 ounces of water, ingested over 15 to 20 minutes. Repeat the same process as the day before for subsequent water intake. Consumption should be complete at least 2 hours before the colonoscopy.

Cost

Generic Name	Brand Name	Manufacturer	Dose	Cost**/Prep
Sodium sulfate/potassium chloride/magnesium sulfate	Sutab	Braintree Labs	12 tablets the evening before procedure and 12 tablets the morning of procedure with specified amounts of water	$150/kit
PEG 3350 with Electrolytes	Colyte, GaviLyte, Golytely	Various, Gavis Pharmaceuticals, Braintree Labs	8 oz of mixed solution every 10 minutes until 2000ml consumed, evening before, repeat process the day of procedure	$39.28/4000ml (brand), $12.72/4000ml (generic)
PEG 3350 with Electrolytes and citric acid	MoviPrep	Bausch Health	8 oz of mixed solution every 15 minutes until 1000ml consumed, followed with 16 oz additional fluid evening before, repeat process the day of procedure	$112.03/kit (brand), $100.72/kit (generic)
Sodium picosulfate, magnesium sulfate, and anhydrous citric acid	CLENPIQ	Ferring Pharmaceuticals	1 packet of powder mixed with water the evening prior to procedure followed with specified amounts of water, repeat the process the morning of procedure	$254.88/320ml

** Wholesale Acquisition Cost

Conclusion

Over 15 million colonoscopies are performed in the United States each year for the screening of colon cancer and other various GI disorders. Sutab is indicated for the cleansing of the colon as a preparation for colonoscopy in adults. The safety and efficacy of Sutab were established in two randomized, multicenter, single-blind, active-controlled trials with 548 and 388 adults, respectively. The primary efficacy endpoint in both studies was the proportion of patients with successful colon cleansing. The difference in the primary endpoint between Sutab and comparator in in the 2 studies was 3.0% and 3.1%, respectively. Sutab was non-inferior to the comparator in

both studies based on the primary endpoint analysis. The most common adverse effects were nausea, abdominal distention, nausea, and upper abdominal pain.

Recommendation

The MO Healthnet Division recommends adding this drug to the current high cost kit fiscal edit.

References

1) Colonoscopy Overview. American College of Gastroenterology. https://gi.org/topics/colonoscopy/. Accessed December 31, 2020.
2) Infection Rates after Colonoscopy, Endoscopy at US Specialty Centers are Far Higher Than Previously Thought. Johns Hopkins Medicine. https://www.hopkinsmedicine.org/news/newsroom/news-releases/infection-rates-after-colonoscopy-endoscopy-at-us-specialty-centers-are-far-higher-than-previously-thought. May 31, 2018.
3) Sutab Package Insert. https://medlibrary.org/lib/rx/meds/sutab/. November 2020.
4) Sutab Drug Information. Clinical Pharmacology. https://www.clinicalkey.com/pharmacology/monograph/5288?n=SUTAB. Accessed December 31, 2020.
5) U.S. National Library of Medicine. A Safety and Efficacy Comparison of BLI4700 Bowel Preparation Versus an FDA-approved Comparator in Adult Subjects Prior to Colonoscopy. https://clinicaltrials.gov/ct2/show/NCT03404401?term=NCT+03404401&draw=2&rank=1. October 21, 2019.
6) U.S. National Library of Medicine. A Safety and Efficacy Comparison of BLI4700 Bowel Preparation Versus an FDA-approved Comparator in Adult Subjects Prior to Colonoscopy. https://clinicaltrials.gov/ct2/show/NCT03261960?term=NCT+03261960&draw=2&rank=1. October 21, 2019.

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