MARVIX AI

# SAMPLE GUT HEALTH / MICROBIOME MEDICINE SOAP NOTE

POST-INFECTIOUS IBS-D — SIBO & DIET REBUILD

Questions? Visit us at www.marvix.ai

## 1 PATIENT INFORMATION

### 1 PATIENT DETAILS

| | |
|---|---|
| NAME | Priya N. Raghunathan |
| DOB | 11/02/1991 |
| AGE / SEX | 34 yrs / Female |
| MRN / PATIENT ID | GH-77315 |
| DATE OF SERVICE | 08/13/2026 |
| PROVIDER | Aaron J. Feld, DO |
| CREDENTIALS | DO, IFMCP |
| PRIMARY CARE PROVIDER | Sandra Lim, MD |
| VISIT TYPE | Follow-Up — breath test and stool result review, reintroduction planning |
| CARE SETTING | Outpatient Integrative Clinic, co-managed with gastroenterology |
| REFERRING PROVIDER | Gastroenterology — Naveen Rao, MD |
| INTERPRETER USED | None required |

## CC CHIEF COMPLAINT

### 2 PRIMARY GUT HEALTH CONCERN

"The low-FODMAP diet helped more than anything else has, but every time I add bread or onion back I'm in the bathroom for two days. I'm down to about fifteen foods and I'm scared to eat anything else. I want to know what the breath test showed and how I get my diet back."

## S SUBJECTIVE

### 3 PATIENT-REPORTED GI SYMPTOMS, DIET & TREATMENT HISTORY

### 3a REASON FOR EVALUATION & SYMPTOM PROFILE

**Reason for Gut Health / Microbiome Medicine Evaluation**

Interval follow-up (visit 3) for post-infectious diarrhea-predominant IBS with suspected small intestinal bacterial overgrowth, to review a positive hydrogen breath test and stool studies, assess response to a 6-week low-FODMAP trial

and completed rifaximin course, and build a structured reintroduction plan. Secondary concern is progressive dietary restriction with iron and vitamin D deficiency.

### Primary Digestive Symptoms

At intake (05/2026): 5–8 loose stools daily, Bristol 6–7, with urgency and two episodes of near-incontinence per week; postprandial bloating rated 8/10 with visible distension by evening; crampy periumbilical pain relieved by defecation; excessive gas. Currently: 2–3 stools daily, Bristol 5, bloating 3/10, no urgency episodes in 3 weeks — except after fructan reintroduction, when symptoms return to baseline within 6 hours and persist 36–48 hours. No vomiting, no melena, no hematochezia.

### Symptom Onset and Course

Abrupt onset during travel to Vietnam in June 2025 with culture-confirmed *Campylobacter jejuni* enteritis treated with azithromycin. Acute illness resolved in 8 days, but loose stools, urgency, and bloating never returned to baseline — a clear post-infectious pattern. Symptoms worsened after a second antibiotic course (amoxicillin-clavulanate for sinusitis, 11/2025) and during a high-stress work quarter. No symptom-free interval longer than 4 days until the low-FODMAP trial. No nocturnal diarrhea at any point.

## 3b BOWEL, PAIN & UPPER GI DETAIL

### Bowel Habits

Baseline pre-illness: one formed stool daily, Bristol 4. Current: 2–3 stools daily, Bristol 5, morning-predominant, brown, no mucus, no visible blood, no oily or floating stools. Urgency mild and no longer disruptive. No straining, no incomplete evacuation, no incontinence in the past 3 weeks. No nocturnal stools. Diary-confirmed against the 14-day log she brought.

### Abdominal Pain / Discomfort

Periumbilical and left lower quadrant, crampy, 3–4/10 currently (was 6–7/10), lasting 20–40 minutes, appearing 30–90 minutes after meals and relieved after a bowel movement. Triggered reproducibly by wheat, onion, and garlic; not by lactose. No radiation, no nocturnal awakening from pain, no pain with menses beyond her usual mild dysmenorrhea.

### Reflux / Upper GI Symptoms

Mild heartburn 1–2 nights per week when eating after 2100, no regurgitation or sour taste. No dysphagia or odynophagia. Early satiety and postprandial fullness were prominent during flares and have improved. Belching reduced. No cough, throat clearing, or hoarseness. Never used a proton pump inhibitor; declines one, preferring meal-timing measures.

## 3c DIET, INTOLERANCE & EXPOSURES

### Dietary Pattern and Triggers

Pre-illness diet was varied South Indian vegetarian with legumes, wheat, and dairy. Current diet is a self-tightened low-FODMAP pattern of approximately 15 foods: white rice, oats, eggs, chicken, firm tofu, zucchini, carrots, spinach, cucumber, blueberries, bananas (unripe), lactose-free yogurt, olive oil, hard cheese, and rice noodles. Fiber estimated 14 g/day (was ~32 g). No fermented foods (stopped kimchi and idli after a bloating episode). No alcohol since June 2025. Coffee one cup daily, tolerated. Water 2 L/day. Sorbitol-containing gum discontinued.

### Food Intolerance / Allergy Concerns

Structured reintroduction attempted at home in weeks 5–6: *lactose* (250 mL milk) tolerated with no symptoms — consistent with a negative lactose breath test. *Fructans* failed twice, reproducibly: two slices of wheat bread and half a cooked onion each produced bloating 8/10 and 5–6 loose stools within 6 hours, resolving over 36–48 hours. *Galacto-oligosaccharides* (half cup canned lentils) produced moderate bloating without diarrhea. Fructose and polyols not yet tested. No IgE-mediated symptoms — no urticaria, lip swelling, wheeze, or anaphylaxis. Prior IgG "food sensitivity" panel purchased online in 2025 listed 22 foods; discussed as clinically unvalidated at the prior visit and not being used to guide the diet.

### Antibiotic / Medication Exposure

Azithromycin (06/2025, Campylobacter), amoxicillin-clavulanate (11/2025, sinusitis) with symptom worsening afterward, rifaximin 550 mg TID ×14 days completed 07/28/2026 for a positive hydrogen breath test. No PPI. Ibuprofen 1–2 doses monthly. No metformin, GLP-1 agonist, or opioids. Loperamide 2 mg used PRN before work meetings, roughly twice weekly at intake, now rarely. Supplements: peppermint oil enteric-coated capsules twice daily (helpful for cramping), a multi-

strain probiotic self-started 03/2026 (no clear benefit, stopped 05/2026), magnesium citrate 200 mg nightly (started for sleep — discussed as a possible contributor to loose stools).

## 3d GI HISTORY, MICROBIOME CONTEXT & SYSTEMIC SYMPTOMS

### Prior GI History

No prior GI diagnosis before 2025. Colonoscopy 03/2026 (age-inappropriate but performed for chronic diarrhea): macroscopically normal to the terminal ileum; random biopsies negative for microscopic colitis, no inflammation. No IBD, no celiac disease, no H. pylori history, no prior SIBO diagnosis, no diverticular disease, no gallbladder or pancreatic disease. No abdominal surgery. Appendix intact.

### Microbiome / Dysbiosis Context

Two antibiotic courses within 6 months, a documented enteric infection, international travel, a marked drop in dietary diversity (from an estimated 45 to 15 plant foods weekly), elimination of all fermented foods, high work stress, and short sleep — a convergent post-infectious dysbiosis picture. One direct-to-consumer microbiome test purchased 04/2026 reporting “low diversity” and “low Akkermansia”; limitations reviewed with the patient again today.

### Gut-Brain / Systemic Symptoms

Fatigue moderate and improved with iron repletion started 06/2026. Brain fog on flare days. Anticipatory anxiety about eating in restaurants and about work travel, with two declined work trips — GAD-7 11 (moderate). Sleep 5.5–6 h with initial insomnia on flare nights. No skin rash, no joint pain, no oral ulcers, no fevers. Mood otherwise stable, PHQ-9 6.

### Nutrition and Weight

Weight 121 lb, down 9 lb from a stable 130 lb pre-illness, with 3 lb regained since the last visit. Appetite preserved but eating is fear-driven and increasingly narrow. Protein intake adequate at approximately 1.1 g/kg. Fiber inadequate at 14 g/day. Iron deficiency without anemia and vitamin D deficiency documented. No purging, no calorie counting, no body-image-driven restriction — restriction is symptom-driven, but the trajectory meets criteria for concern about avoidant/restrictive intake and was named explicitly with the patient. Dietitian involved since 06/2026, two visits completed.

### Stress and Lifestyle Factors

Software product manager, high-deadline quarter, 50–55 h weeks. Stress 7/10. Eats lunch at her desk in under 10 minutes while on calls, poorly chewed. Physical activity: yoga twice weekly, walks 4,000–6,000 steps/day. Frequent domestic work travel with poor food options — a named trigger for both symptoms and restriction. No shift work. Skips breakfast on 3–4 days per week.

### Prior Testing and Treatment

Stool studies, celiac serology, calprotectin, colonoscopy with biopsies, lactose and glucose-hydrogen breath tests, abdominal ultrasound, and a full nutrition panel — all detailed below. Treatments to date: loperamide PRN, peppermint oil, a multi-strain probiotic (no benefit), a 6-week dietitian-guided low-FODMAP elimination with partial reintroduction, and a completed rifaximin course.

### Family History

Mother: hypothyroidism and IBS-C. Father: type 2 diabetes. Maternal aunt: celiac disease (biopsy-confirmed) — the reason celiac serology was repeated with total IgA. No family history of inflammatory bowel disease, colon cancer or polyps before age 60, liver disease, or pancreatic disease.

### Pertinent Negatives

Denies GI bleeding, melena, and hematochezia. No nocturnal diarrhea. No persistent vomiting, dysphagia, or odynophagia. No fever, night sweats, or jaundice. No severe focal abdominal pain. Weight loss is 7% and has stabilized with 3 lb regained — noted as a monitored, not escalating, finding. No family history of early colon cancer.

## ROS GUT HEALTH / MICROBIOME REVIEW OF SYSTEMS

### 4 PERTINENT POSITIVES & NEGATIVES

| | |
|---|---|
| Abdominal pain, bloating, gas, reflux, nausea | **Positive: postprandial bloating 3/10 (was 8/10), crampy pain 3–4/10, gas, mild heartburn 1–2 nights/week. Negative for nausea and vomiting.** |
| Bowel pattern | **Positive: 2–3 stools daily Bristol 5, mild urgency; fructan-triggered flares to 5–6 loose stools. Negative for blood, mucus, oily stools, nocturnal stools, incontinence.** |
| Dysphagia, satiety, appetite, weight | **Positive: early satiety on flare days, 9 lb loss with 3 lb regained. Negative for dysphagia and odynophagia.** |
| Gut-brain symptoms | **Positive: fatigue, flare-day brain fog, anticipatory eating anxiety (GAD-7 11), initial insomnia. Negative for suicidal ideation.** |
| Skin, joints, immune | **Negative for rash, itching, flushing, joint pain, oral ulcers, and inflammatory flares.** |
| Food and medication reactions | **Positive: reproducible fructan reaction, moderate GOS reaction, magnesium citrate possibly loosening stools. Negative for IgE-type reactions and lactose intolerance.** |
| Systemic illness | **Negative for fever, night sweats, dehydration, and jaundice.** |

## O OBJECTIVE

### 5 OBSERVED FINDINGS

#### V VITALS

| | |
|---|---|
| TEMPERATURE<br>**98.0 °F** | BLOOD PRESSURE<br>**108/68 mmHg** |
| HEART RATE<br>**76 bpm, regular** | RESPIRATORY RATE<br>**14/min** |
| OXYGEN SATURATION<br>**99% on room air** | HEIGHT<br>**5′ 4″ (163 cm)** |
| WEIGHT<br>**121 lb (54.9 kg) — up 3 lb from 06/2026** | BMI<br>**20.8 kg/m²** |
| WAIST CIRCUMFERENCE<br>**28 in (71 cm)** | PAIN SCORE<br>**2/10 at rest, 4/10 postprandial** |

### 5a FOCUSED EXAMINATION

**General Appearance**

Alert, well-groomed, no distress. Slender build, thin but not cachectic. Well hydrated. Ambulates normally. Engaged and articulate, brought a printed 14-day symptom diary and her own reintroduction spreadsheet.

**Head / Eyes / Ears / Nose / Throat**

Conjunctivae pink, no pallor. No scleral icterus. Oral mucosa moist, no ulcers or angular cheilitis. Tongue normal without glossitis or papillary atrophy. Dentition intact, no enamel erosion. No signs of overt micronutrient deficiency on exam.

### Neck

Supple. No cervical or supraclavicular lymphadenopathy. Thyroid non-enlarged and without nodules. No tenderness.

### Cardiovascular

Rate and rhythm regular, no murmur. Pulses 2+ and symmetric, capillary refill brisk. No edema. No orthostatic symptoms; no signs of volume depletion.

### Pulmonary

Normal effort, clear to auscultation bilaterally, no wheeze or crackles. Room air.

### Abdomen

Bowel sounds present and mildly increased in all quadrants. Soft, mild fullness without true distension at this visit (patient notes distension is evening-predominant). Mild tenderness on deep palpation in the periumbilical and left lower quadrant without guarding or rebound. No masses, no palpable stool burden. Liver span normal, no hepatomegaly or splenomegaly. No ascites, no hernia, no surgical scars. Carnett sign negative — visceral rather than abdominal-wall pain.

### Rectal / Perianal Exam

Not performed this visit. Performed 05/2026 and documented as normal: no fissures, hemorrhoids, tags, fistula, or abscess; normal sphincter tone; no palpable mass; stool brown and occult-blood negative.

### Skin

No rash, eczema, urticaria, or flushing. No jaundice or pallor. No bruising or excoriations. No dermatitis herpetiformis-type lesions. Nails without koilonychia.

### Musculoskeletal

No joint tenderness, swelling, or effusion. Full range of motion. Gait normal.

### Neurologic

Alert and oriented ×3. Cranial nerves intact. Strength 5/5, sensation intact including vibration and proprioception. Gait and Romberg normal — no evidence of B12-related neuropathy.

### Psychiatric

Mood anxious but composed; affect appropriate and reactive. Cooperative, highly engaged, health-literate. Insight good. Fear of food is the dominant psychological finding. No hopelessness, no suicidal ideation, no safety concerns.

## GA GUT HEALTH / MICROBIOME ASSESSMENT DOMAINS

### 6 KEY GUT-HEALTH CONTRIBUTORS ASSESSED

| | |
|---|---|
| Bowel pattern and stool quality | **Improved from Bristol 6–7 (5–8/day) to Bristol 5 (2–3/day) — roughly 65% improvement by diary.** |
| Dietary diversity and fiber intake | **Markedly reduced: approximately 15 foods, 14 g fiber/day, down from ~45 plant foods and ~32 g fiber pre-illness. Primary target this visit.** |
| Fermented food intake and tolerance | **None currently. Stopped after a single bloating episode; not systematically retested.** |
| Food triggers and restrictive eating patterns | **Fructans reproducibly positive; GOS moderate; lactose negative. Restriction now exceeds what her tested triggers justify.** |

| | |
|---|---|
| Medication exposures | **Two antibiotic courses in 6 months plus rifaximin; nightly magnesium citrate; PRN loperamide and occasional NSAID. No PPI, metformin, or opioid.** |
| Stress, sleep, and gut-brain interaction | **Stress 7/10, sleep 5.5–6 h, GAD-7 11 with anticipatory food and travel anxiety — a significant and modifiable amplifier.** |
| Physical activity and sedentary behavior | **Yoga twice weekly, 4,000–6,000 steps/day. Adequate; not a limiting factor.** |
| Hydration and meal timing | **Hydration adequate (2 L/day). Meal timing poor: breakfast skipped 3–4 days/week, lunch eaten in under 10 minutes at the desk, late dinners driving reflux.** |
| Prior infection, travel, post-infectious pattern | **Culture-confirmed *Campylobacter jejuni* 06/2025 in Vietnam with no return to baseline — classic post-infectious IBS-D.** |
| Dysbiosis / SIBO / malabsorption / motility considerations | **Hydrogen-predominant SIBO confirmed by breath test; malabsorption effectively excluded (normal elastase, negative fecal fat, negative celiac serology with normal total IgA); inflammation excluded (calprotectin 38, normal biopsies).** |
| Red flags requiring conventional GI evaluation | **None active. Weight loss stabilized and reversing; colonoscopy within 5 months is normal; no bleeding, fever, or nocturnal diarrhea. Gastroenterology remains co-managing.** |
| Patient readiness for nutrition and lifestyle change | **High for structured reintroduction (9/10) but confidence low (4/10) due to fear of provoking a flare — the specific barrier this plan addresses.** |

## N NUTRITION / ELIMINATION DIET / REINTRODUCTION ASSESSMENT

### 7 NUTRITION INTERVENTIONS & SAFETY CONSIDERATIONS

| | |
|---|---|
| Current diet pattern | **Self-tightened low-FODMAP, approximately 15 foods, vegetarian-leaning with eggs, chicken, and tofu.** |
| Foods eliminated and duration | **All high-FODMAP foods for 11 weeks total — 5 weeks beyond the intended 6-week elimination phase. Fermented foods eliminated 5 months.** |
| Symptom response to elimination | **Substantial: bloating 8/10 to 3/10, stools 5–8/day to 2–3/day, urgency resolved. Roughly 65% global improvement.** |
| Reintroduction results | **Lactose tolerated. Fructans failed reproducibly twice (wheat, onion). GOS moderate reaction without diarrhea. Fructose and polyols not yet challenged.** |
| Risk of excessive restriction or nutritional inadequacy | **Present and rising — 7% weight loss, iron and vitamin D deficiency, fiber 14 g/day, and fear-driven avoidance beyond tested triggers. Named as a treatment target, not a side issue.** |
| Protein, fiber, micronutrient, and calorie adequacy | **Protein adequate (~1.1 g/kg). Calories borderline adequate** |

| | |
|---|---|
| | with weight now rising. Fiber inadequate. Iron and vitamin D deficient; B12 and folate adequate. |
| Hydration status | Adequate — 2 L/day, clinically euvolemic. |
| Meal timing and eating behavior | Breakfast skipped 3–4 days/week; lunch under 10 minutes at desk during calls; dinner after 2100 several nights weekly. All three addressed in the plan. |
| Food access and preparation barriers | Good home access and cooking skill; the real barrier is work travel and desk-lunch culture. |
| Dietitian involvement | Active — two visits since 06/2026 with a GI-trained dietitian; two further visits authorized for reintroduction sequencing. |
| Patient-selected nutrition goals | (1) Reach 25 plant foods per week within 8 weeks. (2) Complete fructose and polyol challenges by 09/15. (3) Retest one fermented food weekly at a small dose. (4) Eat lunch away from the desk on 3 days/week. |

## ST SCREENING / ASSESSMENT TOOLS

### 8 STRUCTURED TOOLS & INTERPRETATION

| | |
|---|---|
| Bristol stool scale | Current 5 (was 6–7 at intake); flare days 6–7. Recorded daily in the diary. |
| Food and symptom diary | 14 days reviewed. Correlation strongest with wheat and onion; no correlation with dairy, coffee, or egg. |
| IBS Severity Scoring System (IBS-SSS) | 208 — moderate (was 342, severe, at intake 05/2026). A 134-point drop exceeds the 50-point threshold for clinical response. |
| GERD symptom score | Mild (GerdQ 7) — below the threshold suggesting a PPI trial; addressed with meal timing. |
| Constipation scoring tool | Not applicable — diarrhea-predominant. |
| Rome IV criteria | Met for IBS with diarrhea: recurrent abdominal pain at least 1 day/week for over 6 months, related to defecation, with change in stool form and frequency. |
| PHQ-9 / GAD-7 | PHQ-9 6 (mild). GAD-7 11 (moderate) — anticipatory anxiety about food and travel, up from 8 at intake. |
| Sleep questionnaire | Insomnia Severity Index 11 — subthreshold to mild, flare-linked initial insomnia. |
| Nutrition / malnutrition screening | MUST score 1 — medium risk, driven by unintentional 7% weight loss; weight now trending up. |
| Social determinants of health screening | Negative for food, housing, and transportation insecurity. Employer-sponsored insurance covers dietitian visits. |

## L LABORATORY AND DIAGNOSTIC RESULTS

### 9 RESULTS REVIEWED OR ORDERED

**Routine / Nutrition Labs (08/06/2026)**

CBC: Hgb 12.4 g/dL, MCV 86, platelets normal — anemia resolved (Hgb was 11.2 in 05/2026). Ferritin 11 ng/mL to 28 ng/mL on oral iron, transferrin saturation 19% — iron deficiency improving but not repleted. CMP normal, albumin 4.1. Vitamin D 22 ng/mL (was 18). B12 486, folate normal, magnesium 2.0. TSH 1.6. hs-CRP 1.1 mg/L, ESR 8 mm/h.

**Stool Testing (05/2026)**

GI pathogen panel negative including *Campylobacter*, *Salmonella*, *Shigella*, *Yersinia*, STEC, *Giardia*, *Cryptosporidium*, and *E. histolytica*. *C. difficile* toxin negative. Ova and parasites ×3 negative. Fecal calprotectin 38 mcg/g (normal, under 50) — argues strongly against IBD. Fecal occult blood negative. Pancreatic elastase 412 mcg/g (normal). Qualitative fecal fat negative.

**Breath Testing (07/09/2026)**

Glucose-hydrogen breath test positive: hydrogen rise of 42 ppm above baseline at 60 minutes (threshold 20 ppm within 90 minutes), peak 112 ppm at 90 minutes. Methane remained under 5 ppm throughout — hydrogen-predominant, not methanogen-predominant. Lactose breath test negative (peak rise 6 ppm) with no symptoms, corroborating tolerated dairy reintroduction. Fructose breath test not yet performed — ordered.

**Celiac / Immune Testing**

Tissue transglutaminase IgA under 2 U/mL (negative) with total IgA 187 mg/dL (normal — excludes false negative from IgA deficiency). Deamidated gliadin peptide IgG negative. Performed while consuming wheat, so the result is interpretable. No allergy testing indicated given absent IgE-type features.

**H. pylori / Upper GI Testing**

H. pylori stool antigen negative (04/2026). No EGD performed — not indicated in the absence of dysphagia, anemia unresponsive to iron, persistent vomiting, or weight loss that continues. No pH or gastric emptying study.

**Imaging / Procedures**

Abdominal ultrasound 04/2026: normal liver echogenicity, no gallstones, normal biliary tree, normal pancreas visualized, no ascites. Colonoscopy 03/2026: normal to terminal ileum; random right and left colon biopsies negative for microscopic colitis and for inflammation. No capsule endoscopy or motility study.

**Microbiome Testing**

Patient-purchased direct-to-consumer stool microbiome report (04/2026) describing "low diversity" and "low *Akkermansia*." Reviewed with the patient: such panels are not analytically validated for diagnosis, have no established reference ranges, and cannot direct therapy. The finding is broadly consistent with her clinical picture but is not being used to guide treatment. No clinician-ordered microbiome sequencing planned.

**Prior Records Reviewed**

Gastroenterology notes 03–06/2026 including colonoscopy and pathology reports, primary care notes, travel clinic and urgent care records from 06/2025 with the original Campylobacter culture, two GI dietitian notes, pharmacy history confirming completed rifaximin, and the patient's own 14-day diary and reintroduction spreadsheet.

## A ASSESSMENT

### 10 GUT HEALTH / MICROBIOME CLINICAL INTERPRETATION

- **Post-infectious irritable bowel syndrome, diarrhea-predominant (Rome IV positive)**, following culture-confirmed *Campylobacter jejuni* enteritis in June 2025. IBS-SSS improved from 342 (severe) to 208 (moderate) — a clinically meaningful response to diet and antibiotic therapy.
- **Hydrogen-predominant small intestinal bacterial overgrowth**, confirmed on glucose breath test (42 ppm rise at 60 min, peak 112 ppm; methane under 5 ppm), treated with a completed 14-day rifaximin course. The symptom improvement is consistent with response, though diet was changed concurrently, so the two effects cannot be cleanly separated — a limitation stated for the record.
- **Confirmed fructan intolerance** on two reproducible home challenges, with tolerated lactose (corroborated by a negative lactose breath test) and a moderate GOS reaction. Fructose and polyols remain untested.
- **Differential considered and addressed:** inflammatory bowel disease (excluded — calprotectin 38, normal colonoscopy with normal biopsies), celiac disease (excluded — negative tTG-IgA with normal total IgA while eating wheat, despite an affected aunt), microscopic colitis (excluded on biopsy), exocrine pancreatic insufficiency (excluded — elastase 412, negative fecal fat), bile acid diarrhea (still possible and not yet tested; less likely given the clear fructan reproducibility and the absence of nocturnal diarrhea), and thyroid disease (excluded).
- **No active red flags.** Weight loss has stabilized and reversed by 3 lb, anemia has resolved on iron, and there is no bleeding, fever, or nocturnal diarrhea. Gastroenterology co-management continues; no urgent evaluation indicated.
- **Progressive dietary restriction is now the leading clinical risk** — approximately 15 foods, fiber 14 g/day, 11 weeks of elimination (5 beyond the intended phase), and avoidance well beyond tested triggers. Consequences already measurable: 7% weight loss, iron deficiency, and vitamin D deficiency. Left unaddressed, this pattern also predicts further loss of microbial diversity, which works against her long-term recovery.
- **Gut-brain amplification is significant.** GAD-7 has risen from 8 to 11 with anticipatory food and travel anxiety, two declined work trips, short sleep, and rushed desk eating — each independently associated with symptom amplification in IBS and each modifiable.
- **Medication and supplement contributors:** nightly magnesium citrate is a plausible contributor to loose stools and warrants a trial swap; PRN loperamide use has fallen appropriately; the discontinued multi-strain probiotic showed no benefit and does not warrant restarting; the direct-to-consumer IgG food panel and microbiome report are not clinically actionable.
- **Plan focus:** structured fructose and polyol challenges, a deliberate diversity-rebuilding program rather than further restriction, fermented food retesting, iron and vitamin D repletion, gut-brain therapy, SIBO relapse prevention, and continued dietitian involvement. Bile acid diarrhea testing held in reserve if diarrhea recurs without a dietary explanation.

## P PLAN

### 11 MANAGEMENT BY PROBLEM

- **Nutrition — rebuild diversity (primary goal).** Elimination phase is formally closed today; continuing it further is now the greater risk. Target 25 plant foods per week within 8 weeks and fiber 25–30 g/day, added one food every 3 days at a small portion. Add low-FODMAP-safe fiber sources first (oats, chia, kiwi, blueberries, carrots, green beans, rice bran) before the remaining challenges. Protein maintained at 1.1–1.3 g/kg. Two further GI dietitian visits authorized to sequence this; her spreadsheet will be used as the tracking tool.
- **Symptom-targeted diet plan.** Fructans: confirmed trigger — keep restricted for now, then retest at a lower dose (half slice sourdough wheat, which is lower in fructans) in 6 weeks, since tolerance commonly returns after SIBO treatment. GOS: reintroduce at low dose (quarter cup canned, rinsed lentils) with stepwise increase. Fructose and

polyol challenges scheduled for weeks 2 and 4 with the dietitian. Lactose confirmed tolerated — regular dairy retained. Gluten formally cleared as a separate entity: celiac excluded, so wheat avoidance is fructan-based and not lifelong.

- **Bowel regimen.** Swap magnesium citrate to magnesium glycinate 200 mg nightly to remove a likely osmotic contributor while preserving the sleep benefit. Continue enteric-coated peppermint oil twice daily before meals — patient reports clear benefit for cramping. Loperamide 2 mg PRN retained for travel days, maximum 4 mg/day, with instruction not to use it to enable a known trigger food. Continue daily Bristol and symptom logging.
- **Microbiome support.** Diversity through food, not supplements: 25 plant foods weekly, and a fermented food retest of one item per week starting at 1–2 tablespoons (yogurt first, then kefir, then idli or dosa batter, then kimchi) with 3 days between trials. No routine probiotic restart — her trial showed no benefit and the evidence does not support strain-nonspecific use here. Antibiotics to be avoided unless clearly indicated, with this history flagged in the chart. Reiterated, in writing, that microbiome test reports cannot guide therapy.
- **Reflux / upper GI.** Last meal at least 3 hours before lying down, head-of-bed elevation on symptomatic nights, and smaller evening portions. GerdQ 7 does not warrant a PPI, and a PPI would be undesirable here given the SIBO history. Reassess at follow-up; EGD not indicated.
- **SIBO relapse prevention.** Rifaximin course complete — no repeat course now. Support motility with 4–5 hour fasting windows between meals (no continuous grazing) and no late-night eating. Address the underlying post-infectious motility disturbance through the above rather than through repeat antimicrobials. Repeat glucose breath test only if symptoms clearly relapse after a period of stability, not for surveillance. Discussed openly that recurrence rates after rifaximin are substantial and that a recurrence would not mean failure.
- **Gut-brain plan.** Referral placed for gut-directed hypnotherapy (7-session protocol) and for GI-focused cognitive behavioral therapy — both with evidence in IBS comparable to dietary therapy. Patient chose to start with the hypnotherapy app-based program and accepted a behavioral health referral for the moderate anxiety (GAD-7 11). Diaphragmatic breathing before meals, lunch away from the desk on 3 days/week, chewing pace addressed with the dietitian, and a fixed 2300 lights-out target.
- **Medication and supplement plan.** Discontinue magnesium citrate (switch as above). Do not restart the multi-strain probiotic. Continue ferrous sulfate 325 mg every other day with vitamin C (alternate-day dosing improves absorption and GI tolerance) until ferritin exceeds 50. Start vitamin D3 2,000 IU daily for level 22. Continue peppermint oil. Minimize NSAIDs. No PPI, no digestive enzymes (elastase normal — no indication), and no herbal antimicrobials at this time.
- **Diagnostic plan.** Fructose hydrogen breath test ordered. Ferritin, CBC, and vitamin D in 10 weeks. Serum bile acid diarrhea testing (7αC4 or SeHCAT where available) held in reserve if diarrhea recurs without a dietary explanation after reintroduction is complete. No repeat colonoscopy, no repeat calprotectin unless red flags appear, no repeat microbiome testing.
- **Referral and care coordination.** GI dietitian (two visits, reintroduction sequencing), gut-directed hypnotherapy, behavioral health for anxiety, and continued gastroenterology co-management with Dr. Rao — note sent today summarizing the breath test result, the closed elimination phase, and the restriction risk. Primary care copied for iron and vitamin D follow-through.
- **Patient education.** Reviewed in plain terms: post-infectious IBS usually improves over 12–24 months; the elimination diet was a diagnostic tool, not a destination; a symptom after a challenge is information, not damage or a setback; and continued narrowing carries its own measurable harm. Written reintroduction schedule, fermented-food ladder, and travel-day plan provided. Instructed to contact the clinic for blood in the stool, black stools, fever, persistent vomiting, new nocturnal diarrhea, or any further weight loss, and to seek emergency care for severe unremitting abdominal pain or signs of dehydration.

## F FOLLOW-UP

### 12 REASSESSMENT PLAN

### Follow-up

Return in 10 weeks (10/22/2026) for symptom and Bristol diary review, reintroduction results (fructose, polyols, GOS, low-dose fructan retest), fermented-food ladder progress, plant-food count and fiber intake, weight trend, fructose breath test review, iron and vitamin D recheck, and hypnotherapy and behavioral health follow-through. Dietitian visits at weeks 2 and 5. Earlier telehealth visit at 4 weeks if any challenge provokes a flare lasting beyond 72 hours, if weight falls below 118 lb, or if diarrhea recurs without a dietary explanation.

## TB TIME DOCUMENTATION & BILLING

**TOTAL TIME SPENT**
48 minutes

**NUTRITION COUNSELING TIME**
18 minutes

**LIFESTYLE COUNSELING TIME**
7 minutes

**SUPPLEMENT / MEDICATION REVIEW TIME**
6 minutes

**CARE COORDINATION TIME**
5 minutes

**RECORDS REVIEW TIME**
6 minutes

**LAB / STOOL TEST REVIEW TIME**
6 minutes

**E/M LEVEL**
99215 — established patient, 48 minutes total time on the date of service

**NUTRITION / LIFESTYLE COUNSELING CODE(S)**
Bundled in time-based E/M; dietitian bills 97802 separately

**DIAGNOSTIC TEST INTERPRETATION CODE(S)**
Breath test interpretation performed at the reference laboratory — not separately billed

**CHRONIC CARE MANAGEMENT CODE(S)**
Not applicable this visit

**BASIS FOR BILLING**
Time-based (48 minutes) with high-complexity medical decision making — test review, prescription changes, and specialist co-management

**PRIMARY DIAGNOSIS**
K58.0 — Irritable bowel syndrome with diarrhea

**SECONDARY DIAGNOSES**
K63.821 Small intestinal bacterial overgrowth; K90.49 Food intolerance (fructan); R63.4 Abnormal weight loss; E61.1 Iron deficiency; E55.9 Vitamin D deficiency; R14.0 Bloating; F41.9 Anxiety disorder, unspecified

## SO PROVIDER SIGN-OFF

| PROVIDER NAME | CREDENTIALS | SPECIALTY | DATE | TIME |
|---|---|---|---|---|
| Aaron J. Feld, DO | DO, IFMCP | Gut Health / Microbiome Medicine | 08/13/2026 | 16:20 |

Generated by Marvix AI — **www.marvix.ai** — For clinical use by licensed providers only