Enhanced Primary Care Pathway: DYSPEPSIA

1. Focused summary of dyspepsia relevant to primary care

Dyspepsia refers to a symptom complex of gastroduodenal origin, characterized by epigastric pain or discomfort that may be triggered by eating and may be accompanied by a sense of abdominal distention or "bloating" and loss of appetite. The Rome III committee on functional GI disorders defines dyspepsia as one or more of the following symptoms:

- Postprandial fullness (postprandial distress syndrome)
- Epigastric pain or burning (epigastric pain syndrome)
- Early satiety

Other symptoms such as belching and nausea may occur. There is frequent overlap between dyspepsia and heartburn, which typifies gastroesophageal reflux (GERD). Irritable bowel syndrome also overlaps with functional dyspepsia, where the predominant symptom complex includes bloating and relief after defecation. Biliary tract pain should also be considered, the classic symptom description being post-prandial (worse with fatty meals) deep-seated right upper quadrant pain that builds over several hours and then dissipates.

Dyspeptic symptoms in the general population are common: estimates as high as 30% of individuals experience dyspeptic symptoms, while few seek medical care. **Although the causes of dyspepsia include esophagitis, peptic ulcer disease, *Helicobacter pylori* infection, celiac disease, and rarely neoplasia, most patients with dyspepsia have no organic disease, with a normal battery of investigations including endoscopy**. The mechanism of this symptom complex is incompletely understood, but likely involves visceral hypersensitivity, alterations in gastric accommodation and emptying and altered central pain processing.

2. Checklist to guide your in-clinic review of this patient with dyspepsia symptoms

☐ Absence of red flag features (weight loss, anemia, iron deficiency, dysphagia, vomiting, age >60y with new symptoms)
☐ Negative H. pylori stool antigen (must be done off PPI, H_2-receptor antagonists, antacids for minimum of 3 days, and off all antibiotics for minimum of 4 weeks)
☐ Lifestyle modifications have been discussed and patient has incorporated these into their initial treatment plan (smaller meals, avoidance of identified food triggers, appropriate weight loss, elevation of head of bed, smoking cessation)
☐ Patient adherent to trial of PPI (can start once daily then escalate to twice daily, 30 minutes before breakfast and supper for minimum of 8 weeks)

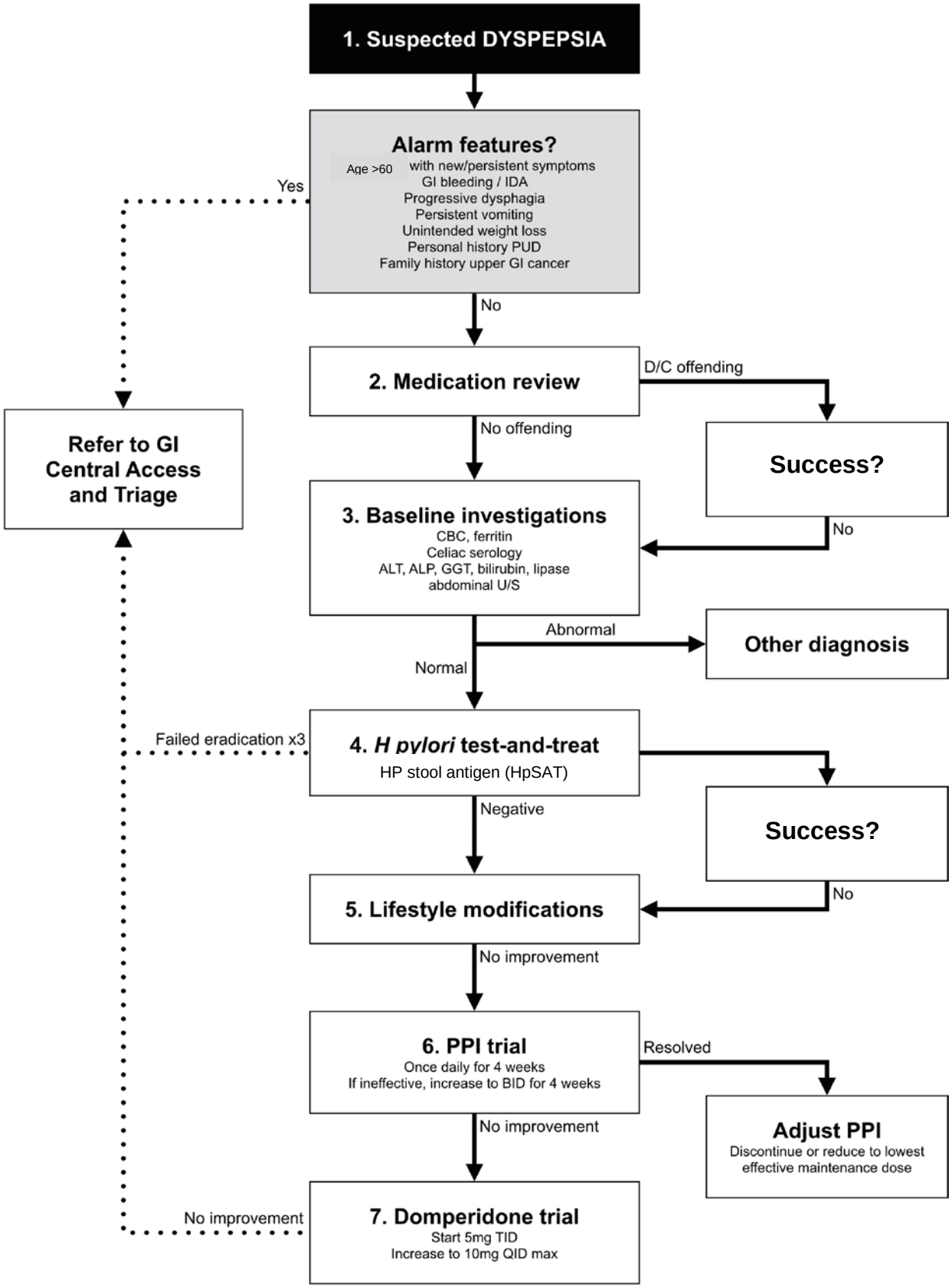
3. Links to additional resources for physicians and patients
Calgary GI Division http://www.calgarygi.com
MyHealth.Alberta.ca https://myhealth.alberta.ca/health/pages/conditions.aspx?Hwid=tm6322
Canadian Digestive Health Foundation http://www.cdhf.ca/en/disorders/details/id/20
UpToDate® – *Beyond the Basics* Patient Information (freely accessible) http://www.uptodate.com/contents/upset-stomach-functional-dyspepsia-in-adults-beyond-the-basics?source=search_result&search=dyspepsia+patient+info&selectedTitle=2~150
Alberta Healthy Living Program www.ahs.ca/info/cdmcalgaryzone.asp

4. Clinical flow diagram with expanded detail

This AHS Calgary Zone pathway incorporates the most current evidence-based clinical guidelines for diagnosis and management of dyspepsia, from both Gastroenterology and Primary Care literature:

Miwa *et al.* Evidence-based clinical practice guidelines for functional dyspepsia. J Gastroenterol 2015. 50:125-39.
Ansari *et al.* Initial management of dyspepsia in primary care: an evidence-based approach. Br J Gen Pract 2013. 63:498-9.
Diagnosis and treatment of chronic undiagnosed dyspepsia in adults. Toward Optimized Practice http://www.topalbertadoctors.org/cpgs/3294128
American Society of Gastrointestinal Endoscopy Standards of Practice Committee. The role of endoscopy in dyspepsia. Gastrointestinal Endoscopy 2007. 66:1071-5. https://www.asge.org/docs/default-source/education/practice_guidelines/doc-dyspepsia_aip.pdf?sfvrsn=6
ACG and CAG Clinical Guideline: Management of Dyspepsia. American Journal of Gastroenterology 2017 Jul;112(7):988-1013. http://gi.org/guideline/management-of-dyspepsia-2/

The following is a best-practice clinical pathway for management of dyspepsia in the primary care medical home, which includes a flow diagram and expanded explanation of treatment options:


1. Suspected DYSPEPSIA
Alarm features?
Age >60 with new/persistent symptoms
GI bleeding / IDA
Progressive dysphagia
Persistent vomiting
Unintended weight loss
Personal history PUD
Family history upper GI cancer
Yes
No
Refer to GI Central Access and Triage
2. Medication review
D/C offending
No offending
Success?
No
3. Baseline investigations
CBC, ferritin
Celiac serology
ALT, ALP, GGT, bilirubin, lipase
abdominal U/S
Abnormal
Other diagnosis
Normal
Failed eradication x3
4. H pylori test-and-treat
HP stool antigen (HpSAT)
Negative
Success?
No
5. Lifestyle modifications
No improvement
6. PPI trial
Once daily for 4 weeks
If ineffective, increase to BID for 4 weeks
Resolved
Adjust PPI
Discontinue or reduce to lowest effective maintenance dose
No improvement
No improvement
7. Domperidone trial
Start 5mg TID
Increase to 10mg QID max

Flow Diagram: DYSPEPSIA Diagnosis and Management - Expanded Detail

1. **Establish the diagnosis of dyspepsia** as defined above through history and physical examination, excluding worrisome features or red flags. In the presence of any red flags, referral to Gastroenterology for consideration of urgent endoscopic investigation is recommended, even though the predictive value of these features is somewhat limited.

2. **Review of the patient's medication profile** should be undertaken to try to identify obvious culprits such as ASA/NSAIDs/COX-2 inhibitors, steroids, bisphosphonates, calcium channel blockers, antibiotics, iron or magnesium supplements. Any new or recently prescribed medication, over the counter or herbal/natural product may be implicated as virtually all medications can cause GI upset in some patients.

3. **Baseline Investigations** aimed at identifying concerning features or clear etiologies:
    - CBC and ferritin
    - Anti-tissue transglutaminase has >95% sensitivity to rule out celiac disease
    - ALT, ALP, GGT, and lipase, aimed at identifying a hepatobiliary or pancreatic source of pain
    - If pain is consistent with biliary colic or liver enzymes or lipase are abnormal or there is a palpable abdominal mass, obtain a trans-abdominal ultrasound.
    - Upper GI series may be considered, but is low yield for relevant findings, as is endoscopy

4. **Test and treat *Helicobacter pylori*** by H. pylori stool antigen test (HpSAT). This strategy is based on evidence that some dyspeptic patients are colonized by *H. pylori* and will have underlying peptic ulcer disease or gastritis.
    - If the HpSAT is positive, 2016 Canadian consensus guidelines now recommend quadruple therapy regimens (see table below).
    - **Triple therapy (PPI + clarithromycin + amoxicillin or metronidazole) is no longer recommended**, as studies of Hp isolates in Canada suggest 25-30% are resistant to metronidazole and 15-20% are resistant to clarithromycin.
    - With the exception of the rifabutin-based regimen, **all treatments for Hp should be 14 days duration**.
    - **ALWAYS discuss with your patient the possible minor or serious adverse effects of antibiotics.** See *Enhanced Primary Care Pathway H. Pylori* for additional details, which includes useful patient information handouts.
    - If fails third line therapy, consider discussion via GI Specialist Link or Netcare e-Referral Advice Request to Adult GI before proceeding to Rifabutin-based treatment.

5. **Lifestyle modification.** There are few studies to support specific dietary recommendations, but a trial of various dietary exclusions under the guidance of a nutritionist or registered dietician may be helpful, including avoidance of lactose and foods high in fructose (FODMAPs).

6. **Empiric anti-secretory medication trial.** In the absence *H. pylori* infection or continued symptoms despite successful *H. pylori* eradication, a trial of standard dose PPI for 4-8 weeks may benefit some patients. PPIs are favoured over H2-receptor antagonists. Initial therapy should be once daily, 30min before breakfast. If there is no significant symptomatic improvement after 4 weeks, step up to BID dosing or switch to another PPI. If symptoms are then controlled, it is advisable to titrate down to the lowest effective dose.

7. **Trial of motility agents.** Although delayed gastric emptying can be demonstrated in 30-80% of patients with dyspepsia, gastric emptying studies are not part of routine investigation of dyspepsia. Prokinetic agents improve gastric emptying, and some patients may find clinical benefit. Domperidone can be used in escalating doses, suggest starting at 5mg TID-AC, up to 10mg PO QID as a 2-4 week trial.

   There are insufficient data to recommend the routine use of bismuth, antacids, simethicone, misoprostol, anti-cholinergics, anti-spasmodics, TCAs, SSRIs, herbal therapies, probiotics or psychological therapies in functional dyspepsia. However, these therapies may be of benefit in some patients, and thus a trial with assessment of response may be reasonable and is unlikely to cause harm.

2016 Canadian Association of Gastroenterology Guidelines for Treatment of *H. pylori*

<table>
<tr><th colspan="3">First Round</th></tr>
<tr><td>CLAMET Quad for <u>14 days</u>
• PPI standard dose BID
• Clarithromycin 500mg BID
• Amoxicillin 1000mg BID
• Metronidazole 500mg BID</td><td>OR</td><td>BMT Quad for <u>14 days</u>
• PPI standard dose BID
• Bismuth subsalicylate 524mg QID
• Metronidazole 375mg QID
• Tetracycline 500mg BID</td></tr>
<tr><th colspan="3">Second Round</th></tr>
<tr><td colspan="3">• If CLAMET Quad was used as initial treatment, then use BMT Quad for second round
• If BMT Quad was used as initial treatment, then use CLAMET Quad or consider Levo-Amox</td></tr>
<tr><th>Third Round</th><th colspan="2">Fourth Round</th></tr>
<tr><td>Levo-Amox for <u>14 days</u>
• PPI standard dose BID
• Amoxicillin 1000mg BID
• Levofloxacin 250 mg BID</td><td colspan="2">Rif-Amox for <u>10 days</u>
• PPI standard dose BID
• Rifabutin 150mg BID
• Amoxicillin 1000mg BID

IMPORTANT: Rif-Amox should only be considered after failure or intolerance of other regimens. Rifabutin has rarely been associated with potentially serious myelotoxicity. The pros and cons of giving fourth-line therapy should be decided on a case-by-case basis.</td></tr>
<tr><td colspan="3">Standard doses of PPIs are: omeprazole 20mg, rabeprazole 20mg, lansoprazole 30mg, pantoprazole 40mg, esomeprazole 40mg, and dexlansoprazole 30mg</td></tr>
</table>

IMPORTANT INFORMATION REGARDING YOUR RECENT REFERRAL

To ensure that your referral is triaged appropriately, please review this quality referral checklist as you create the referral. Free pocket sized copies of this checklist are available through Quality Referral Evolution (QuRE) at www.ahs.ca/QuRE.

PATIENT INFORMATION
Name, DOB, PHN, Address, Phone, Alternate contact, Translator required

PRIMARY CARE PROVIDER INFORMATION
Name, Phone, Fax, cc/Indicate if different from family physician

REFERRING PHYSICIAN INFORMATION
Name, Phone, Fax

REASON FOR REFERRAL
Diagnosis, management and/or treatment
Procedure issue / care transfer

PATIENT'S CURRENT STATUS
Stable, worsening or urgent/emergent
Understanding of situation
Key symptoms and findings
Symptom onset / duration
Red flags

FINDINGS AND/OR INVESTIGATIONS
(RELEVANT RESULTS ATTACHED)
What has been done & is available
What has been ordered & is pending

CURRENT & PAST MANAGEMENT
(LIST WITH OUTCOMES)
None
Unsuccessful / successful treatment(s)
Previous or concurrent consultations for this issue

COMORBIDITIES
Medical history
Pertinent concurrent medical problems
Current & recent medications (name, dosage, PRN basis)
Allergies
Warnings & challenges

TIPS

Assist with patient communication by indicating patient's preferred method of contact and if they will be unavailable (holiday, etc)

Don't forget that the referring physician isn't always the family physician. Keep everyone in the loop with a cc.

Make sure to express clear expectations for the consult and, when possible, outline a specific question.

Current status is must-know clinical information that has direct impact on triage of the referral.

Ensure you have listed all ordered tests so the receiving consultant does not unknowlingly order the same tests again.

Provide information on what has been tried previously and why a consult is required.

A complete medical history can help the consultant determine the complexity and urgency of the referral.

Alberta Health Services