Strategies for Cost Effective GI Referrals:

Can We Create a Paradigm Shift?

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Objectives

Create a paradigm shift that:

A. Supports and enhances optimal care

B. Also reduces the cost of evaluations

Incorporates new insurance incentives

- Reduce use of high cost specialists
- Reduce costly tests

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Utilize Community – GI Partnership

Develop tools for more efficient evals

- **What can/should be done in the office?**
- **Guidelines for when to refer**
- **Guidelines for helpful – and not so helpful - tests**

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Where Should the Initial Focus Be? Is There Low Hanging Fruit?

New patient diagnoses in 2015

Constipation	**25%**
Abd pain + constipation	**15%**
Abd pain	**10%**
GERD	**10%**
Poor growth/feeding problems	**10%**
Celiac disease	**10%**

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More Efficient Evaluations

GI Perspective:

Many referrals come with limited or no evaluation

As partners, can we develop an effective system to deal with these problems?

What format/content works best?

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Consult/Referral Guidelines

1st attempt 7 years ago

9 general categories

Chronic abd pain

Chr non-bloody diarrhea

Bloody diarrhea

Rectal bleeding

GERD

Poor growth

Constipation

Encopresis

Vomiting

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CHILDREN'S GASTROENTEROLOGY, HEPATOLOGY, AND NUTRITION CONSULT AND REFERRAL GUIDELINES FOR COMMON GI PROBLEMS

DIAGNOSIS/SYMPTOM	SUGGESTIONS FOR INITIAL WORK-UP	POSSIBLE PRE-REFERRAL THERAPY	CONSIDER REFERRAL WHEN
CHRONIC ABDOMINAL PAIN ICD-9 code – 789.0 Age: toddler to adolescence	• Weight and height percentiles • Urinanalysis • CBC with dif ESR or CRP • Stool Studies: – guaiac – consider EIA antigen for giardia • Careful evaluation of stooling pattern • Diary to look for possible triggers such as foods, activities or stressors	• Treatment of constipation, if present • Acid suppression - H2 receptor • Antagonist or proton pump • Inhibitor • Trial off lactose	If symptoms persist after improvement of stooling pattern, trial of a lactose-free diet and lack of response to acid suppression, referral should be made. The child may require endoscopy (EGD) and/or colonoscopy.
CHRONIC, NON-BLOODY DIARRHEA ICD-9 code – 787.91 Age: preschool to adolescence	• Weight and height percentiles • Stool studies: – guaiac – consider leukocytes – culture – EIA antigen for giardia – C. difficile toxin titer – Reducing substances, pH, – Sudan stain (spot test for fecal fat) • CBC with differential, ESR or CRP • Albumin • Quantitative IgA and anti-tTG Antibody (screen for celiac) • Consider sweat test • Consider upper GI with small bowel follow through • Consider laxative abuse, especially in adolescent females	• Treat any dietary abnormality (e.g. high fructose and/or low fat) • Try increased fiber in diet • Diary of dairy and other food intake in relation to symptoms	If Symptoms persist, referral should be made. The child may require EGD and/or colonoscopy.

DIAGNOSIS/SYMPTOM	SUGGESTIONS FOR INITIAL WORK-UP	POSSIBLE PRE-REFERRAL THERAPY	CONSIDER REFERRAL WHEN
BLOODY DIARRHEA (COLITIS) ICD-9 code – 556 Age: infancy	• Stool studies: – guaiac – culture – consider stool O and P – C. difficile toxin titer for child > 3 months old • CBC with differential • PT and PTT • Albumin	If evaluation is negative, food protein allergy is likely.	If symptoms persist, referral should be made.
BLOODY DIARRHEA (COLITIS) ICD-9 code – 556 Age: preschool to adolescence	• Stool studies: – guaiac – culture – and C. difficile toxin titer • CBC with differential • PT and PTT • Albumin • Urinanalysis	If evaluation is negative, inflammatory bowel disease is likely.	If symptoms persist, referral should be made. The child will require EGD and colonoscopy.
BLOOD IN STOOL/RECTAL BLEEDING ICD-9 code – 569.3 Age: infancy	• Stool studies: – guaiac – culture – C. difficile toxin titer for child > 3 months old • Assess stool frequency and consistency • CBC with differential • PT and PTT	Anal/rectal tear is most likely cause.	If symptoms persist, referral should be made.

BLOOD IN STOOL/ RECTAL BLEEDING

ICD-9 code – 569.3
Age: preschool to adolescence

- Stool studies:
  - guaiac
  - culture
  - C. difficile toxin titer
- Assess stool frequency and consistency
- CBC with differential
- PT and PTT

Anal/rectal tear is most likely cause.

If symptoms persist, referral should be made. Colonoscopy may be required.

GASTROESOPHAGEAL ESOPHAGEAL REFLUX DISEASE (GERD)

ICD-9 code – 530.11
Age: infancy to adolescence

- Weight and height evaluation
- Stool guaiac
- CBC with differential
- Consider Upper GI series
- Refer to "Guidelines for Evaluation and Treatment of Gastroesophageal Reflux in Infants and Children" Journal of Pediatric Gastroenterology and Nutrition. (32)Suppl 2. 2001; S1-S31
- Also available at www.naspghan.org (under "Medical Professionals" - Position Papers)

Acid suppression (H2 receptor antagonist or proton pump inhibitor).

If symptoms persist, referral should be made. The child may require an EGD.

POOR GROWTH (FAILURE TO THRIVE)

ICD-9 code – 783.40
Age: infancy to adolescence

- Caloric intake
- 3-day diet diary
- Trial of concentrated calories
- Stool Studies: Guaiac, pH, reducing substances, pH, Sudanstain
- Urinanalysis
- CBC with differential
- Serum electrolytes
- BUN, creatinine
- Albumin
- Consider sweat test, quantitative IgA, anti-tTG antibody
- Can consider ESR or CRP in a child or adolescent

Increase caloric content of diet.

If breastfed infant, consider fortifying pumped breast milk or supplementation with formula.

If problems persist, referral should be made. The child may require an EGD and/or colonoscopy.

DIAGNOSIS/SYMPTOM	SUGGESTIONS FOR INITIAL WORK-UP	POSSIBLE PRE-REFERRAL THERAPY	CONSIDER REFERRAL WHEN
VOMITING WITH OR WITHOUT ABDOMINAL PAIN			
ICD-9 code – 787.03 Age: infancy to adolescence	• Use history and physical to evaluate for triggers, GERD, or neurologic causes • Weight and height percentiles • CBC with differential • Serum electrolytes • Amylase and lipase • Consider ESR or CRP • Urinanalysis • Consider upper GI series to rule out anatomic abnormality	Consider trial of acid suppression (H2 receptor antagonist or proton pump Inhibitor)	If problems persist, referral should be made. The child may require an EGD.
CONSTIPATION			
ICD-9 code – 564.00 Age: infancy to adolescence	Refer to "Constipation in Infants and Children: Evaluation and Treatment" Journal of Pediatric Gastroenterology and Nutrition. 1999:29:612-26. Also available at www.naspghan.org (under "Medical Professionals" - Position Papers	Treatment should include the AAP recommended 6 servings of fruits and vegetables each day, adequate fluid intake, daily vigorous physical activity and the use of a safe, (preferably non-absorbed) stool softener like lactulose or miralax. Successful treatment should continue to ensure that improvement persists.	If problems persist, referral should be made.
ENCOPRESIS			
ICD-9 code – 787.6 Age: preschool to adolescence	See above	Successful treatment usually involves 3 components: (1) treatment of constipation (see above), (2) a regular pattern of sitting on the toilet after each meal to invoke the gastro-colic reflex, and (3) psychological counseling. Successful treatment also usually takes months.	If problems persist, referral should be made.

4 Categories

Problem: Diagnosis/Symptoms

Suggestions for Initial Evaluation

Possible Pre-Referral Therapy

When to Consider Referral

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How Could This Be Used?

Re-look at my top 3 referral diagnoses

- Constipation
- Abdominal pain
- GERD

Utilize initial evaluation/treatment based on NASPGHAN guidelines

www.NASPGHAN.org

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Constipation

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Constipation

Many referred patients have not had a trial of medication

Fewer have had trial of diet (⬆ fiber + water intake)

and regular physical exercise

Utilize evidence-based recommendations from NASPGHAN JPGN. 2014

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Chronic Abdominal Pain

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Abdominal Pain

Long differential

Only about 10-15% of patients have GI cause

Don’t forget constipation

Helpful questions include:

‘how long do you sit on the toilet to poop?’

JPGN: 2008;47:679–715

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Abdominal Pain

Forget *H pylori*

Essentially no evidence to support causal relation between *H pylori* gastritis and abd symptoms in absence of ulcer disease

Cases of non-ulcer abd pain should not be investigated for *H pylori*

Evidence–based Guidelines for *H pylori*

JPGN. 2011;53:230-43

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GERD

GASTROESOPHAGEAL ESOPHAGEAL REFLUX DISEASE (GERD)			
ICD-9 code – 530.11 Age: infancy to adolescence	• Weight and height evaluation • Stool guaiac • CBC with differential • Consider Upper GI series • Refer to "Guidelines for Evaluation and Treatment of Gastroesophageal Reflux in Infants and Children" Journal of Pediatric Gastroenterology and Nutrition. (32)Suppl 2. 2001; S1-S31 • Also available at www.naspghan.org (under "Medical Professionals" - Position Papers)	Acid suppression (H2 receptor antagonist or proton pump inhibitor).	If symptoms persist, referral should be made. The child may require an EGD.

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GERD – Evidence-Based Guidelines

From a GI perspective, GERD in infants is 1 of most commonly over-treated problems

For infants, 3 main presentations:

- Vomiting
- Irritability
- Feeding problems

JPGN: 2009;49:498-547

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GERD – Vomiting

Always consider at least 5 causes:

anatomic

acid reflux disease

immaturity of GI tract

CNS

food allergy

Would not treat with acid suppression if:

normal growth

absence of chronic lung disease

no hematochezia

JPGN: 2009;49:498-547

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GERD – Irritability

No evidence to support empiric use of acid suppression for Rx of irritable infants

Reflux disease is not a common cause of unexplained crying, irritability, or distress in otherwise healthy infants

JPGN: 2009;49:498-547

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GERD – Irritability

Consider: milk protein allergy
neurologic disorders
constipation
infection

After excluding other causes, an empiric trial of hydrolyzed protein formula is reasonable in these selected cases

JPGN: 2009;49:498-547

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GERD – Feeding Problems

Differential similar to that for irritable infant

In feeding refusal, diagnostic evaluation is 1st step

Trial of acid suppression comes later

Utilize an experienced feeding therapist

2 weeks of acid suppression often tried

JPGN: 2009;49:498-547

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How to Reduce Costs for Lab Tests?

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Frequently Ordered Labs Which Should Not Be Ordered

***H pylori* serology – never**

***H pylori* stool antigen test – better test**

but don't screen in abd pain patients

Routine Celiac screen:

quantitative IgA + IgA anti-tTG antibody

Only add endomysial if autoimmune dis

Do not need panel including any

IgG antibodies

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Frequently Ordered Labs Which Should Not Be Ordered

IBD: IBD serology panel

Non-fasting lipid panel

Food allergy testing in infants and toddlers

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Frequently Ordered Labs Which Should Not Be Ordered

O and P for most cases of diarrhea

Use giardia EIA antigen

***C. difficile* in a child with no diarrhea**

Viral studies in bloody diarrhea

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Summary

Who would like to partner in paradigm shifting?

As partners, can we develop tools for more efficient/effective evaluations?

What format/content works best?

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