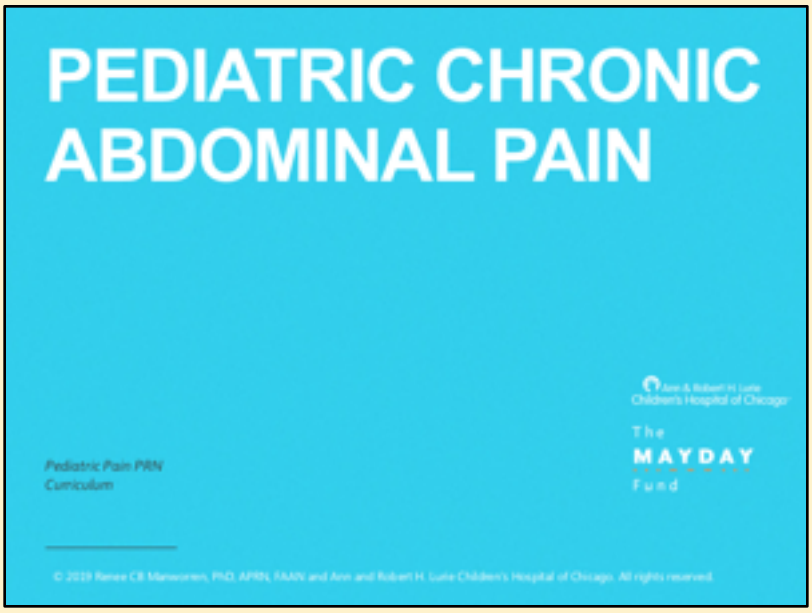
PRN Program: GI Disorders



Materials: Flip chart or whiteboard and Markers
Provide participant guide at least one week in advance

Room Setup: In tables of 4 or 6-8 depending on number of participants

- Display slide as participants walk in
- This session is 45 minutes

Welcome and Introductions: *Introduce facilitator if necessary*

READ: The learning objectives for this content are to:

- Differentiate patterns of pain and other symptoms common to children with inflammatory bowel disease (IBD) as compared to children with functional gastrointestinal disorders.
- Develop a multimodal plan of care for pediatric abdominal pain prevention and treatment.
- Describe the unique aspects of pain assessment and management for children with functional gastrointestinal disorders.

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READ: Divide into two groups. Each group will have a flipchart sheet to write down your answers.

You have 5 minutes to differentiate patterns of pain and other symptoms common to children with inflammatory bowel disease (IBD) as compared to children with functional gastrointestinal disorders.

[Have one group develop a list of pain patterns and symptoms for those with IBD, and have the other side develop a list for children with functional GI disorders.]

[Limit discussion to 5 minutes]

Select participants from each group who are willing to share their answers.

[Limit discussion to 5 minutes]

[10 MINUTES of 45 minute session is complete]

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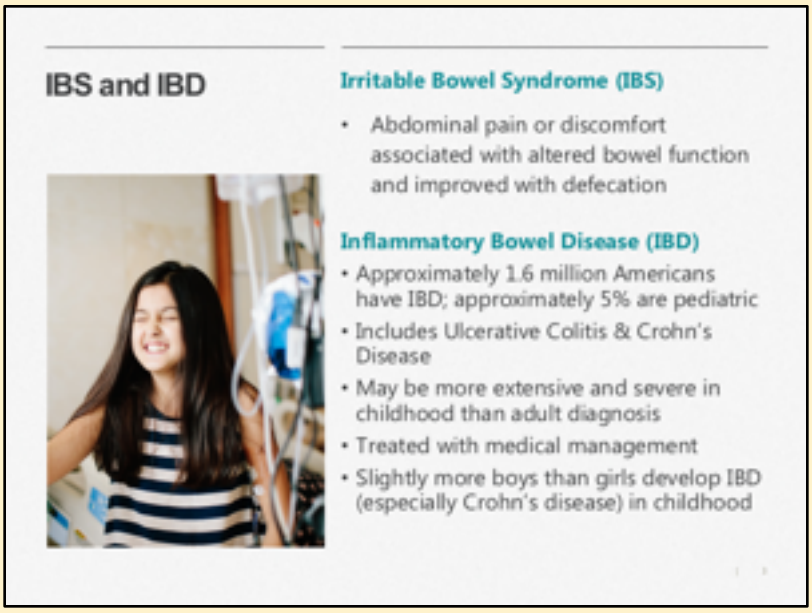

READ: Irritable Bowel Syndrome (IBS) is defined as abdominal pain or discomfort associated with altered bowel function and improved with defecation, whereas Inflammatory Bowel Disease (IBD) can affect any part of the GI tract from mouth to anus, and most commonly affects the end of the small intestine (ileum). Inflammation may extend through entire thickness of bowel wall and can appear in "patches"

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READ: Violet presents to the ED for severe 9 out of 10 periumbilical abdominal pain of an intermittent crampy quality. She is afebrile, has no sick household contacts. She is curled in a fetal position.

ASK: What can be done immediately in the ED to relieve Violet's abdominal pain?

Select participants willing to share their answers to this question. Write on flipchart or board 1-5 word summary for each answer

[Limit to 3 minute]

ADD:** these Key points **(if not included by participants):

Possible responses:
IV opioid,
ice pack,
distraction,
Monitor exam and vital signs,
X-ray,
CT scan laboratory tests, including hemoccult if indicated to rule out acute abdominal pain pathology

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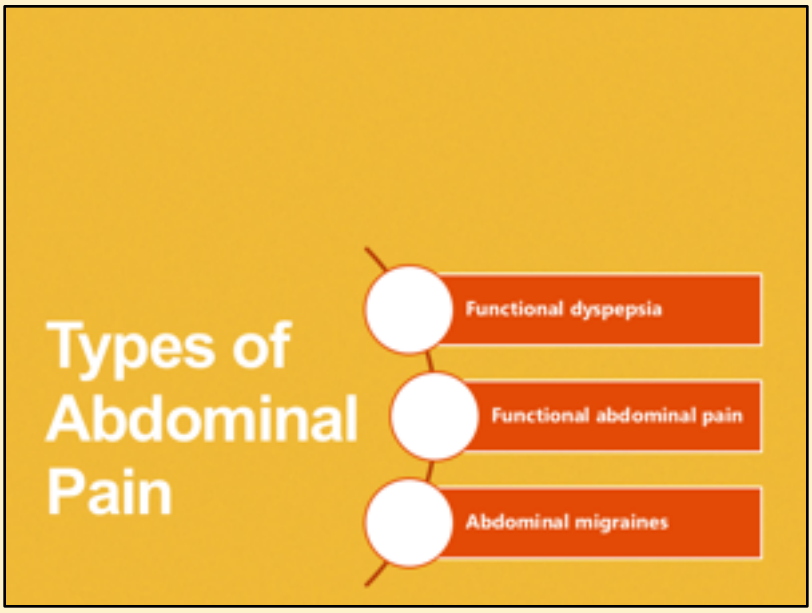

ASK: How do treatment options vary based on the types of pain & Why?

Select participants willing to share their answers to this question for:.

- Treatment of functional dyspepsia
- Treatment of functional abdominal pain
- Treatment of abdominal migraines

[Limit to 3 minute]

ADD:** these Key points **(if not included by participants):

Treatment of functional dyspepsia

- Dietary modification: Avoid large meals or irritating foods (spicy, & coffee), Obese children might find relief from weight loss.
- Elevate HOB, Stop smoking
- Medications (Carafate, PPI, H2 Blocker)

Treatment of functional abdominal pain

- Biopsychosocial approach (Cognitive Behavioral Therapy (CBT), Psychology)
- Yoga, TENs (Transcutaneous Electrical Nerve Stimulation)
- Dietary treatment, Sleep hygiene
- Lidoderm, Antidepressant (Amytriptyline, SSRI – citalopram)

Treatment of abdominal migraines

- NSAIDs, Anti-nausea medication, Triptans, Pizotifen, Gabapentin

[20 MINUTES of 45 minute session is complete]

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ASK: What would you include in a multimodal treatment plan for Violet's pain?

Select participants willing to share their answers to this question.

[Limit discussion to 5 minutes]

ADD:** these Key points **(if not included by participants):

Further assessment of stress, lifestyle, including dietary and bowel habits.

Education regarding biopsychosocial pain model and sensitivity of some children to mesenteric adenitis while other children and adults are unaware of these transient mesenteric findings.

Bowel management, TENs, perhaps Lidoderm at night; avoid opioids.

[25 MINUTES of 45 minute session is complete]

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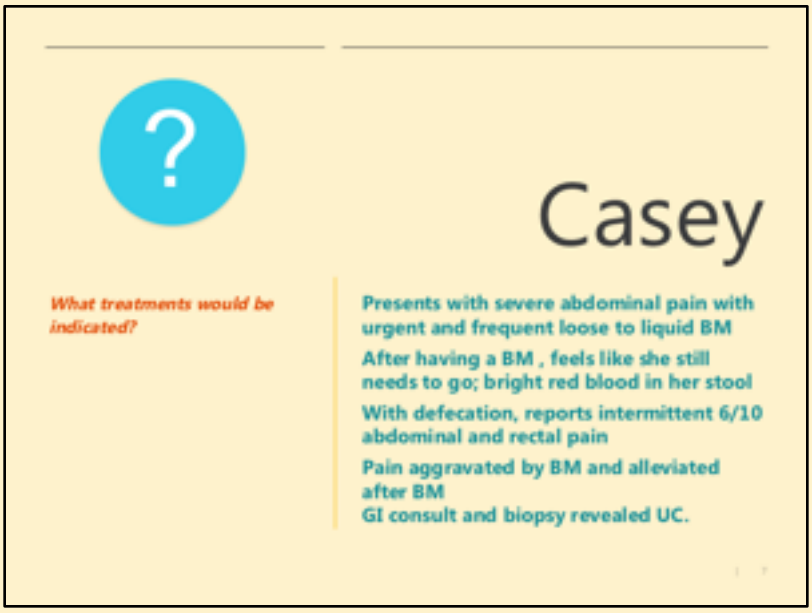

READ: Casey is a 16-year-old who presents with her mother for severe abdominal pain with urgent and frequent multiple loose to liquid bowel movements (BM).

- Casey states that even after having a BM, she feels like she still needs to go. Casey has bright red blood in her stool.
- With defecation, Casey reports intermittent 6/10 abdominal and rectal pain.
- Pain is aggravated by BM and alleviated after BM.
- GI consult and biopsy revealed Ulcerative colitis (UC).

ASK: How would Casey's multimodal treatment plan differ from Violet's (previous case) pain management plan?

Select participants willing to share their answers to this question.

[Limit discussion to 5 minutes]

ADD:** these Key points **(if not included by participants):

- Mediations to treat UC would include: antibiotics, aminosalicylates, corticosteroids, immunomodulators, and biological therapies,.
- NSAIDs are contraindicated due to risk of bowel perforation
- For pain: antispasmodics are used and opioids are for severe pain
- Biobehavioral: She can try yoga, heating pads, and TENs unit too

[30 MINUTES of 45 minute session is complete]

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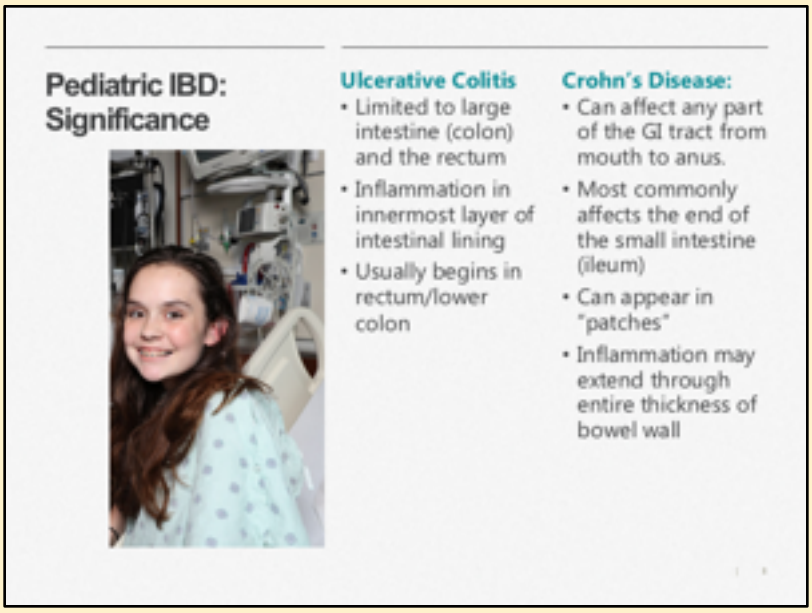

READ: Not all complications of IBD are confined to the GI tract. For reasons that are not entirely understood, IBD related symptoms may affect other parts of the body. The most common of these complications affect the skin and bones. For example, extra intestinal complications may be evident in the:

- eyes (redness, pain, and itchiness)
- mouth (sores)
- joints (swelling and pain) due to Arthritis, Arthralgias, Sacroiliitis, ankylosing spondylitis
- skin (tender bumps, painful ulcerations, and other sores/rashes)
- bones (osteoporosis)
- kidney (stones)
- liver (primary sclerosing cholangitis, hepatitis, and cirrhosis)—occurs rarely.

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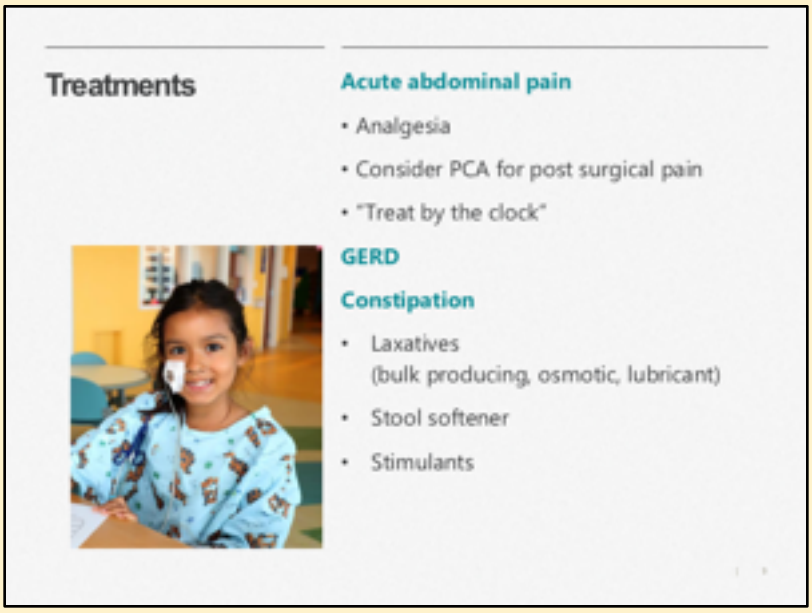

ASK: What treatments would you add for these 3 diagnoses?

Select participants willing to share their answers to this question.

Write on flipchart or board 1 5-word summary for each participant

[Limit discussion to 3 minutes]

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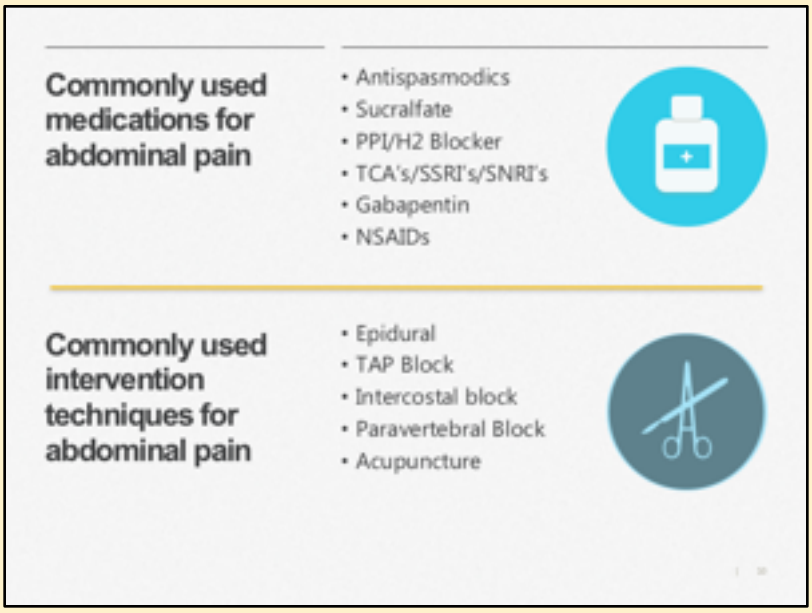

ASK: Who can recall the mechanism of action for each of these medications or techniques?

Select participants willing to share their answers as you go down the list of treatments: Antispasmodics, Sucralfate, PPI, etc. . **[Limit discussion to 6 minutes]**

ADD:** these Key points **(if not included by participants):

Antispasmodics: Slows peristalsis by relaxing stomach and intestinal muscles to reduce cramping (Levsin, Bentyl, Donnatel)

Sucralfate- *forms a coating over ulcers to protect area from further injury. Antacids should be taken 30 minutes before or after sucralfate (Carafate)*

Proton-pump inhibitor (PPI)- *Irreversibly blocks acid production at the terminal stage of gastric acid secretion (Omeprazole/Prilosec)*

H2 Blocker- *Bocks histamine in the parietal cells of the stomach to decrease stomach acid production (cimetidine/Tagamet, ranitidine/Zantac)*

Antidepressants:

- **SNRIs** inhibit the reuptake of Serotonin (5-HT3) and norepinephrine (NE) and 5-HT3 and NE modulate descending inhibition of ascending pain pathways in brain and spinal cord (duloxetine/Cymbalta) SSRI's (sertraline/Zoloft, citalopram/Celexa)
- **Tricyclic antidepressants** also inhibit 5-HT3 and NE, interacts with GABA, block sodium channels and are alpha-1 adrenergic blockers (amitriptyline)

Anticonvulsants: like **gabapentin** (Neurontin) & **pregablin** (Lyrica) are Alpha-2-delta ligand calcium channel antagonists,

Other anticonvulsants used to treat pain block voltage-gated sodium and calcium channels and/or inhibit glutamate release

Epidural- Abdominal coverage is extensive and catheter placement is technically unchallenging.

TAP blocks provide limited analgesic coverage, but can effectively cover entire abdomen.

Intercostal & paravertebral blocks alleviate pain when the catheters are placed with guidance ***[40 MINUTES of 45 minute session is complete]***

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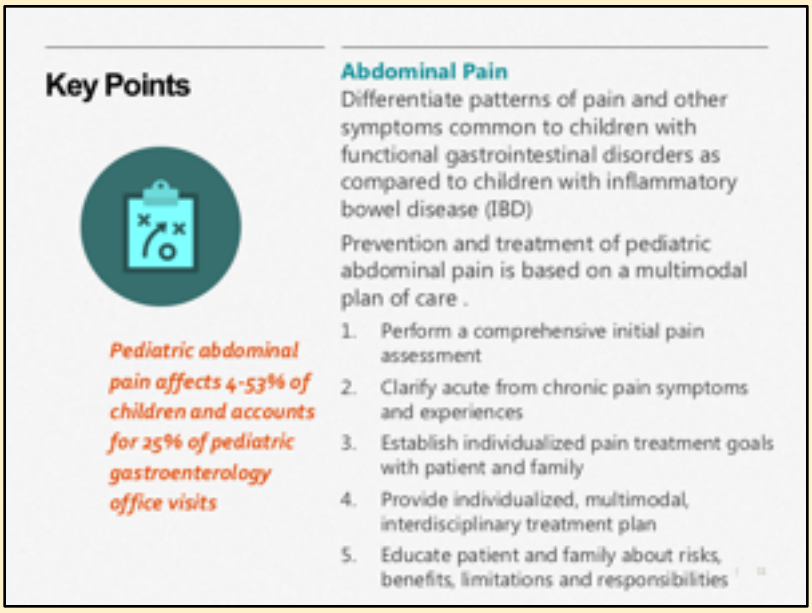

READ: *The key points on the slide*

ASK: Are there any questions?

[45 MINUTE SESSION COMPLETE]