



# Women and GI health: Narrowing the Focus



Cuckoo Choudhary, MD, FACP, AGAF, FAMWA, FCPP  
Dorrance H. Hamilton Professor of Medicine  
Division Lead For Women, Diversity, Equity, and Inclusion  
Division of Gastroenterology and Hepatology  
Department of Medicine, Sidney Kimmel Medical College

I Want this elite group to think..

What can we do to best address gender disparities in gastrointestinal diagnosis, care, research and training?

# A Real-World Case

A 36-Year-Old Woman presents with Chronic Constipation and Bloating for 8-10 years

- Intermittent bloating, incomplete evacuation, and straining for 5+ years
- Prior GI diagnosed her as “IBS-C,” treated with laxatives and SSRIs
- Does not improve; at times feels straining during defecation is worse
- She has heard about you and after multiple recent ER visits for “impaction”, she requests her PCP to write a referral to you!

# A Real-World Case

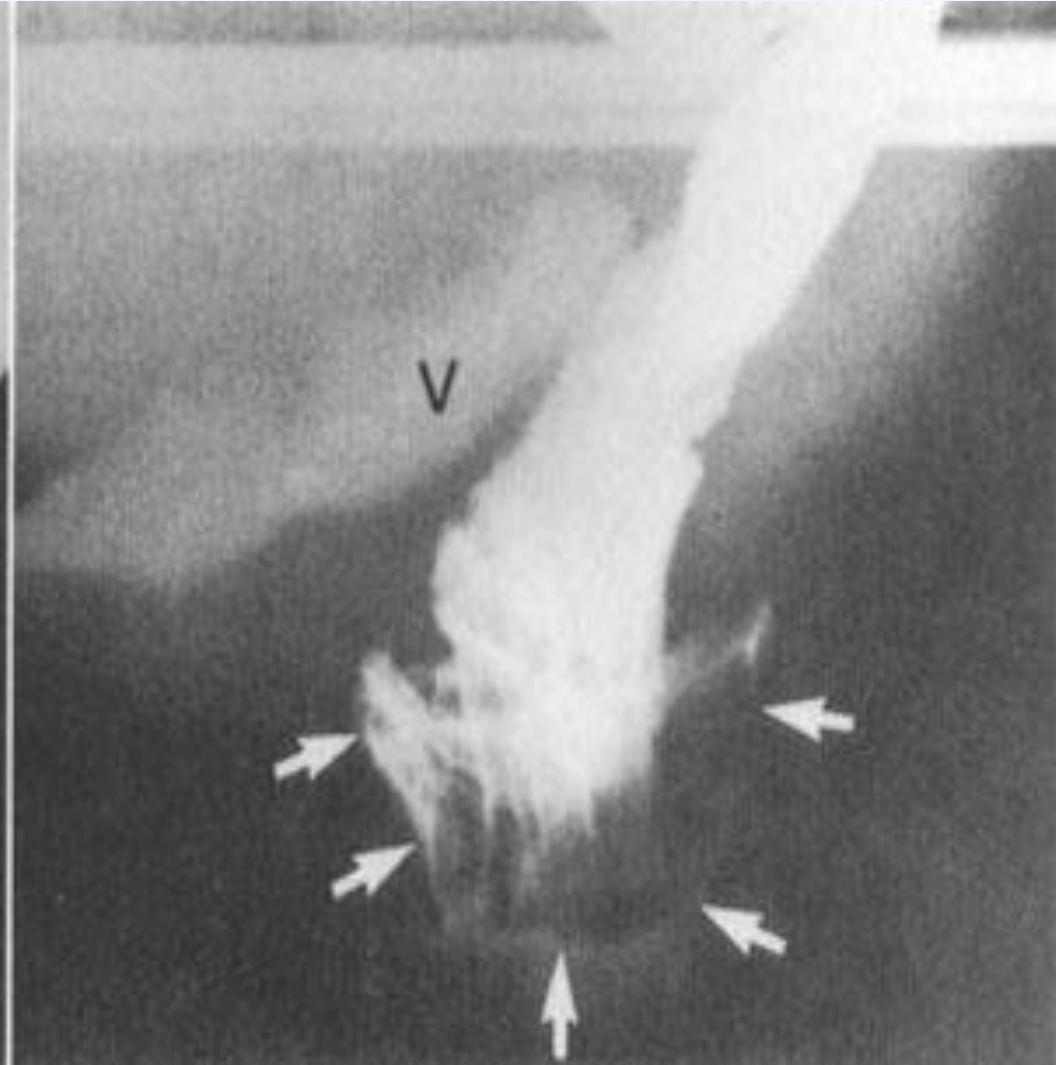
- You are an astute physician who still believes in the power of history taking and clinical diagnosis, so you listen carefully
- Review her records: Normal colonoscopies, CT abdomen( more than 4 in the last 2 years)
- Sitz marker study: >20 markers retained at day 5
- Anorectal manometry: impaired push effort, absent RAIR
- You decide that she has something else which needs an additional test for confirmation

# Diagnostic Bias in Action

What would you do differently with this patient?

- A. Refer to pelvic floor therapist
- B. Repeat imaging
- C. Adjust IBS treatment
- D. Order defecography + anorectal manometry
- E. Ask her to see Psychiatry

# Her Defecography



# What does this case tell us?

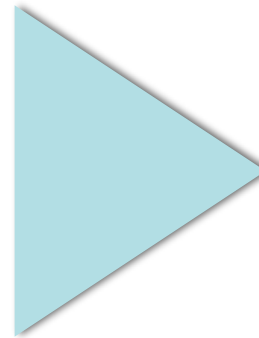
- The diagnosis was missed until she saw you..
- Women are disproportionately affected by pelvic floor dysfunction
  - childbirth and hormonal factors
  - Dx often missed by physicians
- Highlights the diagnostic gap, especially in women where such, and other symptoms are often overlooked/ wrongly attributed to anxiety
  - Reminds us to
  - Focus on recognizing gender differences in GI diseases.
  - Recognize the unique challenges in diagnosis, treatment, and research.
  - Stress the importance of focusing on women's specific GI needs in clinical practice

# My Objectives Today

- Highlight key gender differences in GI health
  - Explore clinical and research gaps in women's GI care
  - Discuss strategies for education, diagnosis, and treatment
  - Promote equity in GI research and training
- 
- “We can't improve what we don't see clearly. Today, we narrow our lens—not to exclude, but to illuminate.”

## Women and GI Health: Narrowing the Focus

Provide a focused look at how gender impacts GI Health in women and, how this knowledge can improve care for Women while training future GI specialists



Address the gaps in Women's GI health, explore the intersection of clinical practice, research and education in addressing their unique GI needs, and advance gender Specific Gastrointestinal care

# Key GI Disorders in Women and Gender Differences

## • Prevalence

- IBS - commoner in women, especially in the reproductive age
- Chronic constipation: Higher rates in women: hormonal influence
- GERD greater disease burden in women; especially during pregnancy and menopause
  - BE is ½ as prevalent in women; shorter segments. Estrogen protective
- IBD: gender differences in disease progression and in response; women showing slightly higher prevalence of Crohn's, with second peak between 50-70 years. Also, higher incidence of certain extraintestinal manifestations

## • Impact of Hormones

- Estrogen and Progesterone effect GI motility, mucosal integrity and the gut microbial composition, and these hormonal fluctuations can alleviate/exacerbate GI symptoms

Heitkemper, M. M., & Chang, L. (2009). *Gender and irritable bowel syndrome: the potential role of gonadal hormones in modulating gastrointestinal function*. *Gastroenterology*, 136(5), 1715-1726.

# Menstrual Cycle and GI Symptoms

## 1. Follicular Phase (Day 1-14):

1. Rising estrogen
2. Mild GI symptoms

## 2. Ovulation (~Day 14):

1. Surge in estrogen & LH
2. Possible bloating or appetite changes

## 3. Luteal Phase (Day 15-28):

1. Progesterone peaks
2. Slowed GI motility → constipation, bloating

## 4. Menstruation:

- Drop in hormones, rise in prostaglandins to shed the uterine lining – these can:
  - Stimulate bowel contractions, cause diarrhea, cramping, and nausea, exacerbate symptoms in those with IBS or IBD.
- Endometriosis symptoms also worsen with menses

# Pregnancy and GI Health



## First Trimester

- Nausea and vomiting common from rising HCG and Estrogen
- Heartburn and GERD symptoms often start

## Second Trimester

- Heartburn and GERD symptoms worsen
- Constipation and bloating due to slowed motility

## Third Trimester

- Constipation continues from progesterone and iron supplements
- Hemorrhoids may worsen due to increased venous pressure
- Diarrhea uncommon, sometimes before labor

ach, T, Pandolfino, J. E, & Parrish, J. (2021). Gastroesophageal Reflux Disease in Women. *Gastroenterology Clinics*

# Pregnancy and IBD

If women with IBD are in remission at conception, they are likely to remain in remission during pregnancy

- 25% conceive while disease is active
- Flares commoner in 1st trimester, especially if disease active at conception
- Slight increased chances of flare in the postpartum period
- Overall, pregnancy induces a state of immune modulation (shifting to a more tolerant immune state), which may help reduce inflammation in some cases.
- Postpartum
  - Increased hemorrhoids, fecal incontinence, pay attention on pelvic floor health
  - Pregnancy is not a contraindication to biologics—but poor communication often makes it one.
- **In IBD, disease control is the best prenatal care**

Al-Jabri, R., Wetwittayakhleng, P., & Lakatos, P. L. (2023). Monitoring of Inflammatory Bowel Disease in Pregnancy: A Review of the Different Modalities. *Journal of Clinical Medicine*, 12(23), 7343

# Celiac Disease and Gender

- Women disproportionately affected
  - 2-3 times commoner
- Considered an autoimmune disease, and women are generally more susceptible to autoimmune conditions due to hormonal influences (like estrogen modulating immune function) and genetic factors (e.g. genes on the X chromosome influencing immune response).
- Classic symptoms commoner : diarrhea, bloating, anemia, weight loss
  - Associated symptoms commoner: infertility, thyroid conditions, premature osteoporosis
- Untreated celiac disease can lead to delayed menarche, irregular periods, infertility and recurrent miscarriage

# Some other aspects of GI health in Women

- **Stress and Mental health**
  - High correlation between stress, anxiety, depression and exacerbation of chronic GI conditions in women
    - Gastroparesis: Women make up ~80% of cases but often face a diagnostic delay.
    - Functional dyspepsia: Often misattributed to anxiety.
- **Pharmacological management**
  - Gender differences in drug response
  - Certain drugs may not be safe during pregnancy, breastfeeding or in overall in the childbearing age group
- Focus on non-pharmacological treatment such as dietary interventions, behavioral therapies such as CBT

Waldron, B., et al. (2011). *Sex and gender in gastrointestinal physiology and disease*. *Neurogastroenterology & Motility*, 23(4), 265-275

# Clinical Relevance for GI Fellows?

- Train fellows to be aware of the gender differences in GI diseases, focus on the differences in pregnancy and menopause, and discuss how to treat diseases safely during pregnancy
- Encourage fellows to think about the menstrual cycle when assessing female patients including those with anemia so that treatment plans can be more personalized
- Incorporate gender sensitive approaches in clinical training i.e stigma around fecal incontinence and pelvic floor disorder associated constipation
- Emphasize the importance of discussing family planning with IBD patients so that they can be best managed during pregnancy

# Challenges in Women's GI Health

- Underdiagnosis/misdiagnosis due to gender bias (all young women with abdominal pain have IBS or anxiety!) or lack of awareness of gender differences
- **Microscopic colitis and celiac often misdiagnosed as IBS**
- There are systemic issues that effect women's access to GI care, and we need to address those
  - Social and cultural factors
  - Flexibility for caregivers
  - Ease of availability and insurance coverage for dieticians, psychologists, psychiatrists and pelvic floor therapists
  - Inclusive care for trans and non-binary patients who face even greater disparities

# GI Health Challenges in the LGBTQ group

- Mistrust of healthcare providers due to prior discrimination can lead to delays in seeking care.
  - Lack of culturally competent providers trained in LGBTQ+ health.
  - Insurance and legal barriers, especially for transgender individuals, may limit access to screening and specialized GI procedures
- 
- Higher prevalence of certain GI infections in this group
  - Higher prevalence of certain cancers: Anal cancer, liver cancer
  - Eating Disorders and certain motility disorders ( IBS, gastroparesis) thought to be commoner in gay men and transgender individuals
- 
- Impact of gender affirming hormone therapy on GI health
  - Impact of stress and mental health on GI health

Barnes, E. L., et al. (2021). *Racial and gender disparities in health outcomes among patients with inflammatory bowel disease: a systematic review*. *Inflammatory Bowel Diseases*, 27(5), 816-826.

## Some other Challenges in Women's GI Health

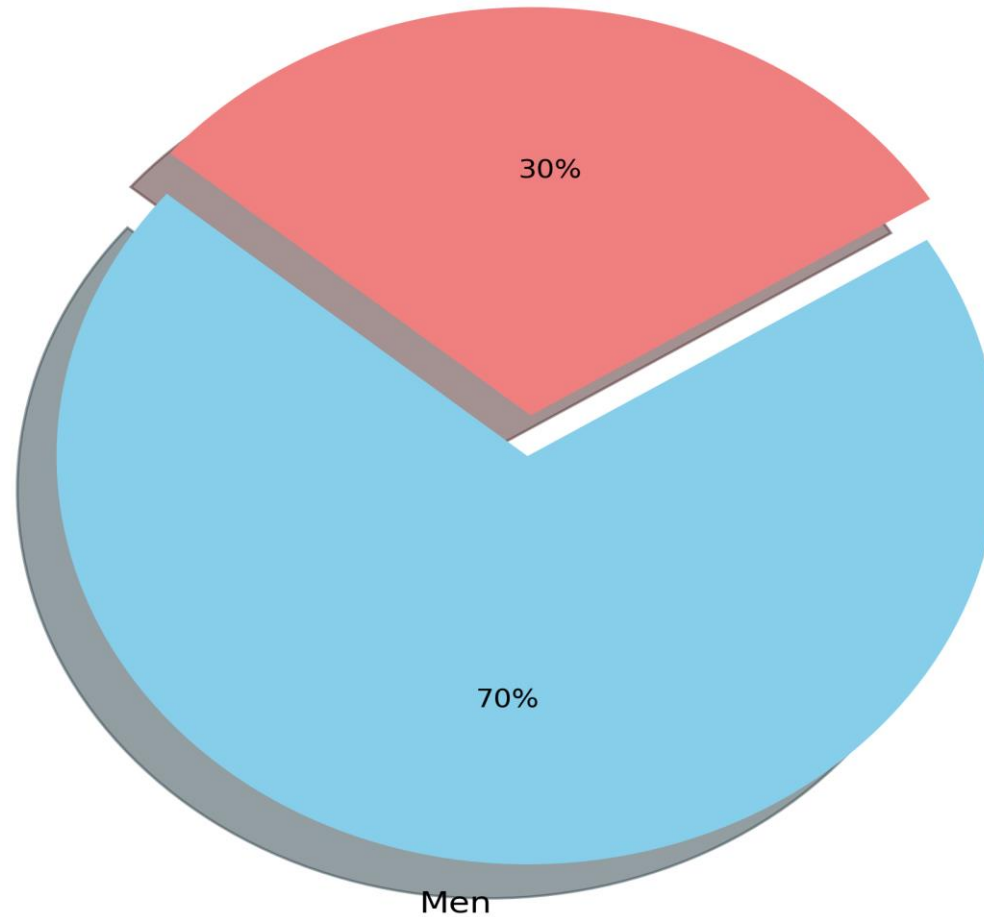
### Not All Women Face the Same GI Health Risks

- Race, SES, trauma history, and healthcare access compound disparities.
- Example: African American women with IBD face higher rates of ED visits and hospitalizations.
- LGBTQ+ women often underrepresented or invisible in research.
- **Key Point: Equity in GI health for women must go beyond sex differences.**

Barnes, E. L., et al. (2021). *Racial and gender disparities in health outcomes among patients with inflammatory bowel disease: a systematic review*. *Inflammatory Bowel Diseases*, 27(5), 816-826.

# Gender Representation in GI Clinical Trials

Gender Representation in GI Clinical Trials  
(Heitkemper & Chang, Gastroenterology, 2009; Waldron et al., Neurogastroenterol Motil, 2011)  
Women



# How to address Gender Disparities in GI Research?

- Be aware of the underrepresentation of women in clinical trials
- Improve Research Representation
  - More women in GI clinical trials
  - Analyze data by sex and gender to uncover differences in symptoms, treatment response, and disease progression (e.g., in IBD, IBS, celiac).
  - Fund studies on female-specific GI conditions (e.g., endometriosis with GI symptoms, pelvic floor dysfunction).

# Train the Trainers and the trainees

## • Trainers

- Highlight educational gaps in the current GI fellowship programs regarding women's health
- Enhance Training in sex and gender differences
- Raise awareness of implicit bias in diagnosis and treatment
- Incorporate gender sensitive communication skills
- Integrate interdisciplinary approaches in training

## • Trainees

- Emphasize the need for to be aware of gender-based differences in the pathophysiology, symptoms, diagnosis and treatment of common GI disorders
- Discuss the importance of incorporating gender sensitive approaches in clinical training i.e stigma around fecal incontinence and pelvic floor disorder associated constipation
- Encourage fellows to explore under-researched areas such as the effect of multiple pregnancies on long term health, the role of GI microbiome on women's health

# Train the Trainers and the trainees

Include sex differences in didactics, board prep

- Use of case-based modules focused on women's GI health
- Clinical rotations with GYN, pelvic floor clinics
- Faculty development on implicit bias and clinical nuance
- Integrate emerging research into teaching rounds
- Champion gender equity in trial enrollment

# Educate and Empower Patients

Provide gender specific education materials to patients

- Normalize conversations about menstruation, pregnancy, menopause, fecal incontinence as it relates to GI health
- Encourage shared decision making, especially around long-term treatment plans that affect fertility/hormone levels
- Create and Organize patient facing conferences
- Hepatology has organized many such conferences in the past
- **Jefferson GI's first patient facing conference for IBD patients will be on September 20, 2025**

# Interdisciplinary collaboration

- Integrate GI care with gynecology, nutrition, integrative medicine, endocrinology and Psych
- Have interdisciplinary conferences
- **We, at Jefferson, launched the Jefferson Women GI and Health Symposium in 2019. It is an annual conference held on the third Friday of February!**
- Objectives:
  - To create a Unique platform to discuss the GI needs of women
  - **Focus on Gender-Specific GI Issues** - Address conditions that disproportionately affect women or manifest differently in them.
  - **Empower Women Physicians** - Especially gastroenterologists, by providing a platform to share their research and ideas.
  - **Foster Supportive Networking** - Offer women physicians a space to connect, collaborate, and exchange expertise in a nurturing environment.
  - The conference is **not limited to women**—it is for anyone who treats or cares for women with gastrointestinal concerns, which includes most healthcare providers across specialties.

# Future Directions in Women's GI Health Research

- More Research needed
  - Gender differences in gut microbiome
  - Long term impact of hormonal therapies on GI health
  - Menopause and its effects on GI health, particularly IBS, GERD and IBD
  - Pelvic floor disorders
- Creating personalized medicine for every woman by tailoring treatment strategies based on hormonal phases, reproductive health, and lifestyle factors that are unique to women

# The launch of the Women's Center at Jefferson Gastroenterology

- Mission: To provide comprehensive, patient-centered care addressing the unique gastrointestinal and hepatobiliary health needs of women.
- Will cater to the unique GI needs of women and offer multidisciplinary care involving gastroenterologists, hepatologists, nutritionists, and other specialists, ensuring integrated management of complex GI conditions like IBD, liver disease, and functional GI disorders.
- Support clinical trials focused on women's GI health
- Enhance patient experience by emphasizing patient education, providing resources on preventive care, early detection, and lifestyle modifications to empower women to manage their GI health proactively.
- Key role in the education and training of medical students, residents, and GI fellows.
- **Strengthen Jefferson's Position as a Healthcare Leader**

# Take aways...

- Women experience unique GI health challenges due to anatomical, physiological and hormonal factors
- They experience GI Diseases Differently: From prevalence to presentation to treatment
- Pelvic Floor Disorders play a major role in GI health
- Bias in Symptom interpretation and Research representation leads to suboptimal care
- Increased focus on gender specific research
- Both trainers and trainees need to be educated more
- Interdisciplinary and interhospital collaboration is needed

# Take aways...

- Narrowing the Focus means precision. It is not exclusion.
- It is safer, better and more equitable care.
  
- Would love to hear your thoughts via phone/text/email
- [cuckoo.choudhary@jefferson.edu](mailto:cuckoo.choudhary@jefferson.edu)
- (856)-465-4565



# Jefferson Health

HOME OF SIDNEY KIMMEL MEDICAL COLLEGE

[JeffersonHealth.org](https://www.JeffersonHealth.org)