Psychological Treatment of the Functional GI Patient

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Anne Mary Montero, PhD, HSPP

Why Consider?

- Prevalence
- Presentation/system use
- Persistent symptoms
- Cost
- Relationship to evident psychological factors:
  - Sx occurrence
  - Sx remediation
- Results from Ψ Tx:
  - Efficacious, efficient, lasting

Dimensions of Overlap

- GI visits 10-15% of US medical population [1]
  - 41% as functional d/o [2]
- Cost of >$20B annually [3]
- Strong overlap with untreated MH problems [4]
  - Medical and mental illness co-occur [5]
    - Anxiety (GAD) and depr in 50-94% of FGID [6]
    - Medically unexplained vs. Somatoform d/o's: up to 50% of sx unexplained[6]
    - Worsens outcomes for FGID [7]

1 http://www.aboutibs.org/#rates
2 Blanchard, 2001 American GI Association National Survey
3 American Journal GI, 1005.
4. Blanchard 2008; Lackner 2009.
5 Spitzer, Williams et al., 1994.
6 Kroenke, 2003.
7 Schoeder, 1997.

Mental Illness in US

- 25% of population, almost 50% in lifetime [1]
- $300B annual cost in US [1]
- Developed nations: leading cause disability [2]
- WHO: morbidity greater than homicide/war [2]

1 Reeves et al., CDC, 2011
2 World Health Organization, 2004.

Cost to System

- Expensive for system: show up 2x as often [1]
- 70% of tertiary care patients meet dx criteria [2]
- Disproportionate utilization and expense: [3]
  - 20.5% of PCP visits, but higher fx/$:
  - ↑ Specialty visits (8.7 vs. 4.9)
  - ↑ ER visits (1.9 vs. 0.5)
  - ↑ Inpatient costs ($3146 vs. $991)
  - ↑ Outpatient costs ($3208 vs. $1771)
- BTW:
  - Uninsured 2x as likely to have psychopathology;
  - HC cost driving bankrupcies, persisting psychosocial stress

1 Borus & Olendski, 1985
2 Lydiard, 2001.
3Barsky et al, 2005.

Cost to System

- Indirect costs of sx: workforce 1
  - 2-3x higher mental health cost vs. medical
    - Decreased productivity:
      - Anxiety: 88% ($42.3B)
      - Depression: 62% ($83.1B)
    - Days off work:
      - Mood d/o alone › chronic medical dz
      - $50B in known costs: lost productivity
      - $150B in undx, untx
- Net: Huge, untreated problem

1 Government Relations Office, March 2008

Psychological Correlates

- At a minimum, co-occur:
  - Hx trauma, abuse, baseline mental health
    - Higher prevalence of IBS/FGID [1]
    - Trigger sx exacerbations [2] (precipitation?)
  - Baseline mental health issues (depression, anxiety)
    - Higher prevalence: 50-94% in IBS [3]
    - Poorer outcomes [4]

1 Chitkara, et al., 1008.
2 Whitehead, 1996.
3 Whitehead, Palsson, Jones 2002.
4 Drossman 1999; Van Oudenhove et al, 2011; Levy et al, 2006.

Psychological Correlates

- Brain influences gut response:
  - Functional dyspepsia:
    - Anxiety: ↓ gastric accomodation, ↑ abdominal pain [1]
    - Depression: ↑ N/V, postprandial pain [2]
  - IBS:
    - Stress: ↑ abdominal/visceral pain [3]
    - Stimulates ileal, colonic motility [3, 4]
- HPA Axis processes:
  - Altered neuroimmune communication [5]
    - Top-down
    - Bottom-up

1 Van Oudenhove, 2007.
2 Clauwaert et al., 2012.
3 Posserud et al., 2004.
4 Whitehead, 1996.
5 Elsenbruch, 2011.

Symptoms → Treatment

- Mild-to-moderate Sx: [1]
  - Diet
  - Medications
  - Lifestyle changes

- Moderate-to-severe Sx: [1]
  - Often refractory
  - Impair Fxg
  - Increased psychosocial impairment, stress ↻

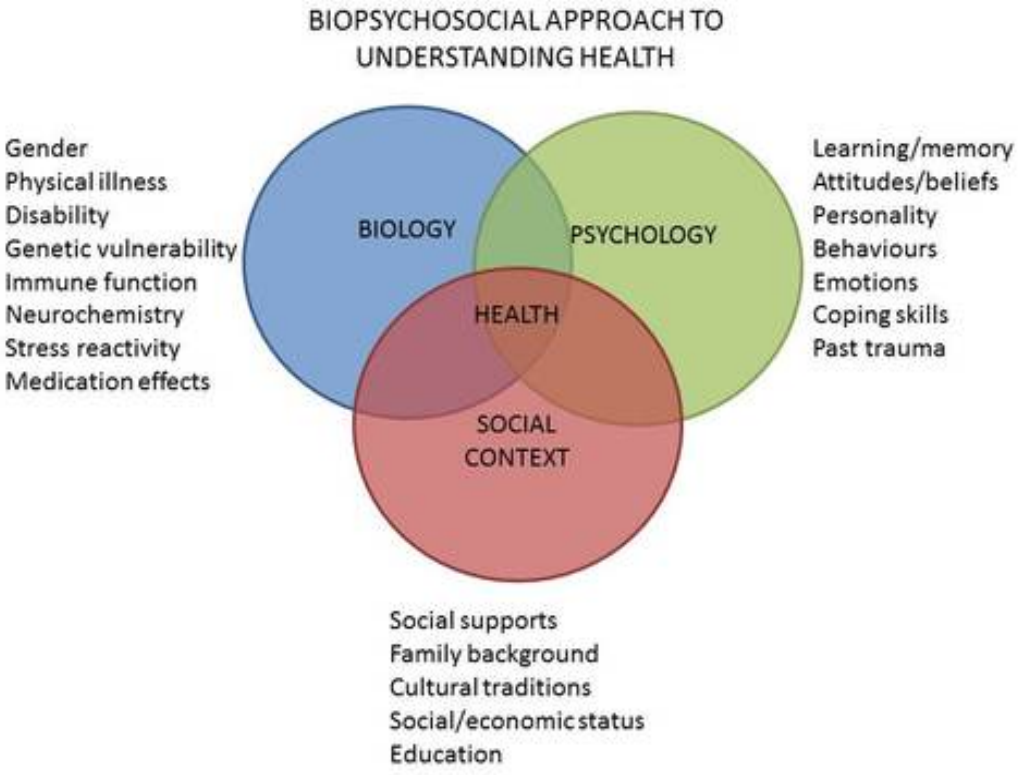
1. Drossman et al., 2000

Missing Link

- Medical management alone: Insufficient
- After 6 mos.' usual medical care:
  Sx "at least somewhat better:"
  - Functional diarrhea: 63%
  - Functional constipation: 56%
  - Functional pain: 56%
  - IBS: 49%

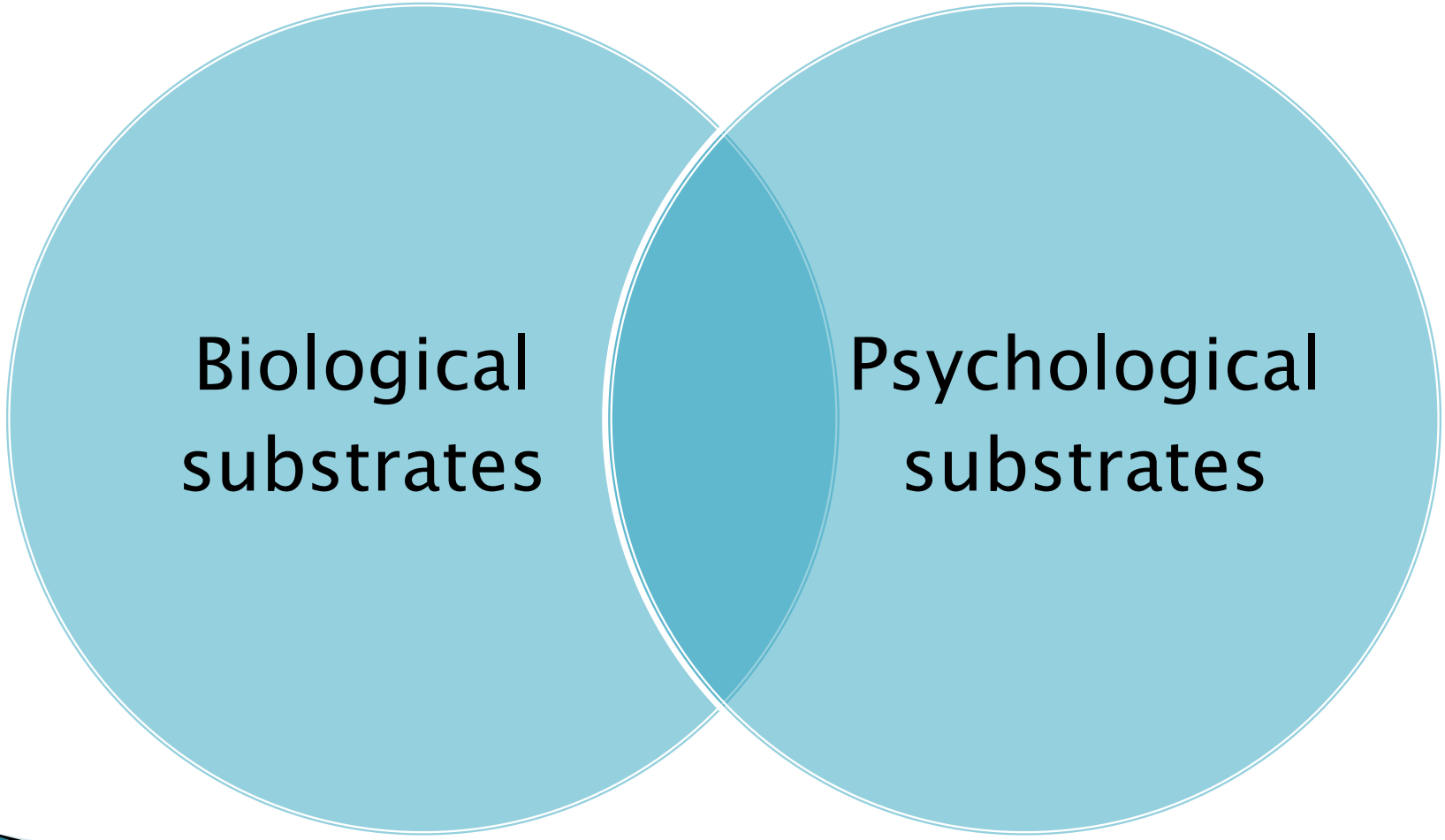
Conceptual Models

- Medical Model vs. Bio-Psycho-Social Model

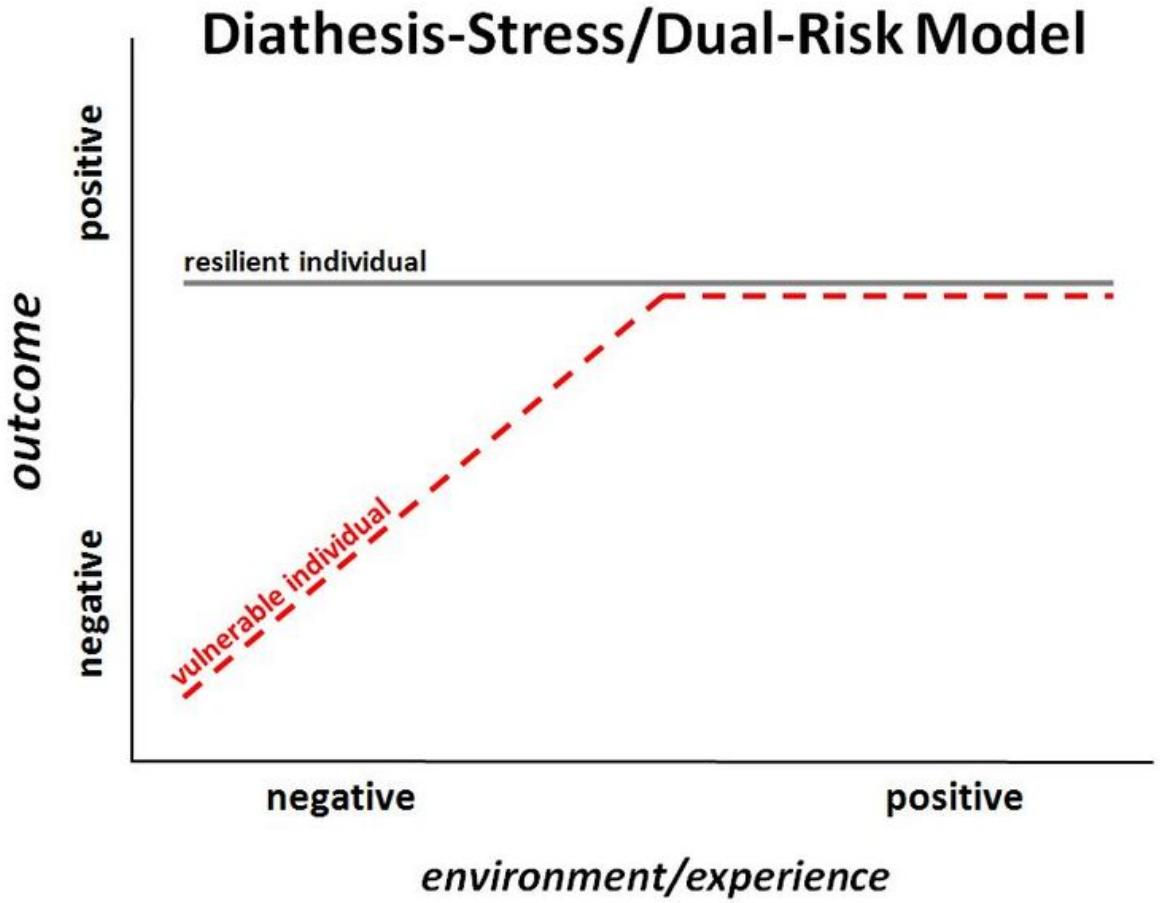


http://perspectivesclinic.com/health-psychology/

Medical-Psychological Overlap:

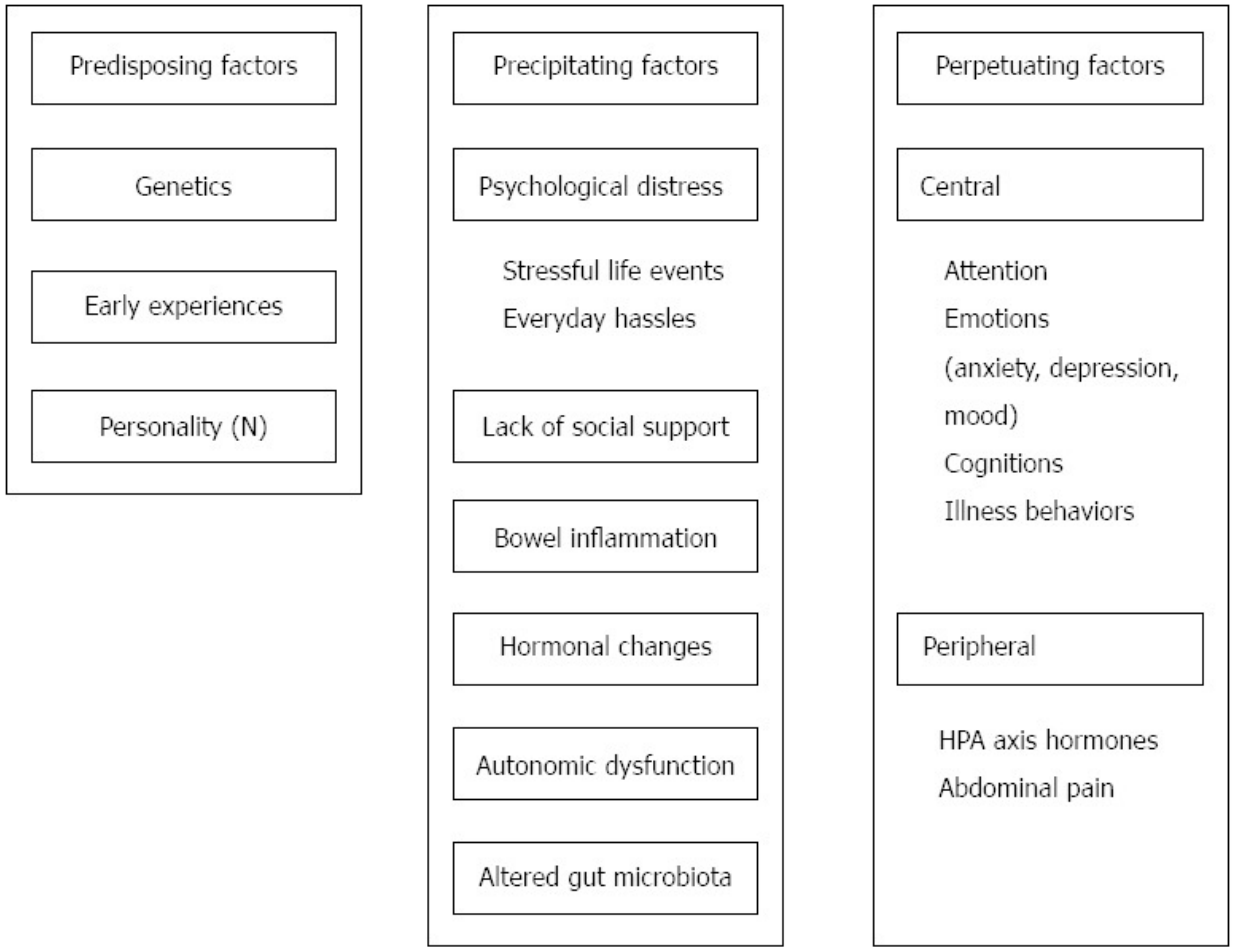


Diathesis-Stress Model



http://en.wikipedia.org/wiki/File:Diathesisstressdualriskmodel.JPG#filelinks

2014 – Bio-Psycho-Social ex.



Hauser et al., 2014

Psychological Treatments

- Am College Gastroenterology [1], American Gastroenterological Assn [2]:
- IBS (moderate to severe) when
  - Refractory
  - Ψ factors ↑ sx
  - (or where Ψ factors evident, ? connection)

- FGID sx improvement plus:
  - Well-being
  - QOL
  - Some changes in medical utilization/cost
    - Reduced utilization 7.2% [1]
    - Reduced cost 18-31% [2]

1 Brandt, LJ, Chey, WD, Foxx-Orenstein, AE, et al., 2009.
2 Drossman et al., 2003.
3. Borus & Olendzki, 1985.
4. Lechnyr, 1992.

Effective Care

- Efficacious
- Efficient
- Lasting

Affects Processes & Outcomes

- What to assess
- Patient-provider relations
- Use of medical care (bounceback/readmission)
- How to treat
- Outcomes

Treatment Options

- Overall Psychological Tx: [1]

SMD:	@2mos	@3mos	
GI Sx	0.97	0.62	vs. SMC
	0.71	-0.17	vs. placebo
Pain	0.54	0.26	vs. SMC
		0.31	vs. placebo
QOL	0.47	0.31	vs. SMC

- CBT
- Hypnosis
- Relaxation Training
- Psychodynamic Therapy
- Biofeedback

1.Zijdenbos et al, 2009

CBT

- Cognitive + behavioral response
  - Current problems
  - Skill building and coping emphasis
  - Empowers patients
- Target awareness of symptoms and effects (train cascade of cycle: Bio-Ψ-Social model)
- Teach to ID, change cog that prompts sx, sx exacerbation

CBT

- Most studied tx
- Efficient: 6-8 sessions
- Most efficacious, most lasting
- 15/18 RCT support superior CBT outcomes [1]
  - Composite bowel sx:
    - 67% (8wk CBT) vs. 31% (self-help support) vs. 10% [2]
    - Fully maintained at 3 mos. [2]
  - Pain:
    - CBT > no △ paroxetine (targets anxiety) > no △ SMC [3]
    - Only tx effective for fxal chest pain [3]

1 Palsson, 2012.
2 Green & Blanchard, 1994.
3 Fernandez et al., 1998.

Hypnosis

- Efficient: 6-12 sessions
- Verbal tx to induce change in medical, Ψ sx through mental state: incr. recepivity
  - Fixed attention, release
  - Target suggestions of sx reduction
    - Smooth muscle relaxation
    - Pain perception
    - Stress impact
    - (Ironically) increases sense of control

Hypnosis

- Meta-analysis: 6/7 RCTs show superior [1]
  - Vs. supportive talk tx, other audio, placebo, SMC
    - Ψ sx
    - QOL
    - GI
- Gains "fully maintained" at 10 [2], 18 months [3]
- LT follow-up: 81% retained after 5y [2]
- 2 RCTs: Fxal dyspepsia: Major ST, LT gains [4]

1 Spinhoven et al, 2010.
2 Van Peski-Oosterbann et al., 1999
3 Jonsbu et al., 2011.
4 Levy et al, 2010.

Relaxation Training

- (Heterogeneous techniques)
- (Part of CBT, ST control)
- Intentional tension, relaxation of muscles:
  - ↓ physical arousal
  - ↓ stress reactivity
- As monotherapy: [1]
  - CBT = Relaxation = SMC
- As composite: [2]
  - PMR + thermal biofeedback + cog skills instruction: 73% improvement, sustained at 1y
  - Relaxation + mindfulnes: 66% impr > antispasmodic meds, sustained at 1y

1 Van Dijk et al., 2008.
2 Scwarz et al, 1986.+ m
3 Shaw, 1991.

Psychodynamic Therapy

- Reduce sx through insight (+△) unconscious processes → sx
- (Part of CBT: Interpersonal vs. Psychodynamic)
- Some support:
  - 3 RCTs: Interpersonal, Psychodynamic Tx ↓IBS [1] [2] [3]
  - Largest RCT: Interpersonal ~= SMC for IBS [4]

1 Sveland et al., 1983.
2 Guthrie et al, 1991.
3Hamilton et al., 2000.
4 Creed et al., 2001.

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Biofeedback

- Beh tx: continuous feedback from measure of physical response
  - Auditory/visual/both
  - Train voluntary control
  - Not focused on cognition, emotion
  - Some support vs. various controls: [1-7]
    - Beh modification, sham feedback, balloon defecation training, meds, botox, surgery, placebo, and SMC

1. Vlieger et al., 2007.
2. Van Tilburg et al., 2009.
3. Calvert et al., 2002.
4. Guthre et al., 1991.
5. Creed et al., 2001.
6. Hamilton et al., 2000.
7. Hjelland et al., 2007.

Biofeedback

- Functional constipation:
  - 6/9 RCTs show superior sx improvement [1]
  - Others: need to specify dyssynergic defacation [2]
  - Largest trials: Substantial ST, LT gains
    - 70-86% improvement vs. 22-48% control [1,3,4]
    - Gains maintained 1y after tx [5]
- Anorectal pain
  - 87% adequate relief
    - Vs. 45% – electromagnetic stim
    - Vs. 22% – PT w levator massage

1. Vlieger et al., 2007.
2. Palsson et al., 2002.
3. Van Tilburg et al., 2009.
4. Calvert et al., 2002.
5. Guthre et al., 1991.
6. Creed et al., 2001.
7. Hamilton et al., 2000.
8. Hjelland et al., 2007.

Biofeedback

- Fecal incontinence
  - Less support for first line of tx [1,2]
    - PT/exercise + education indicated
  - Among nonresponders: 77% vs. 48% for PT [3]

- Functional dyspepsia
  - ↓ QOL[4]

1 Schwander et al., 2011.
2 Miner et al., 1990.
3 Heyman et al., 2009.
4 Hjelland et al., 2007.

Medication Management

- Some data to support:
- Antidepressants: 4.2 odds ratio vs. placebo-pain[1]
  - Pain: TCA [2], SNRI[6,7,8,9] [14], mirtazapine, pregabalin[3]
  - Constipation: SSRI, SNRI [4]
  - Diarrhea: TCA esp amitriptyline[12], SNRI [14]
  - Nausea: mirtazapine[3, 10], SNRI [8]
  - Fxal Dyspepsia: SNRI[8], Buspirone [13], also augmentation
  - Anxiety: SSRI [4, 5], SNRI [14], (TCA)
  - Depression: any!
  - NB: Atypicals: augment, or sec line of tx
    - Pain [10]
    - Anxiety
    - Insomnia
    - Nausea/V [11]

1 Jackson et al., 2000.
2 Morgan et al., 2005., Brandt et al, 2002.
3 James-Stevenson, 2013.
4 Tabas et al., 2004.
5 Spiegel et al., 2005.
6 Chial et al., 2003.
7 Arnold, 2004.
8 Wang, 2003.
9 Brannan, 2005.
10 Thomas, 2000.
11 Thompson, 2000.
12 Vahedi et al., 2008.
13 Tack et al., 2012.
14 Brennan et al, 2009.

Assessment Recommendations

- Drossman: [1]
  - All patients receive some psychosocial assessment
  - Refer for in-depth evaluation:
    - Severe
    - Refractory
    - Noncompliant
    - Trouble coping

1 Levy, Drossman, et al., 2006.

Drossman DA et al, Gastroenterol Endosc Clin N Am 2009;19 (1) 151-170, as cited by James-Stevenson, T 2013.

Contact Information

- Anne Mary Montero, PhD, HSPP
  - Pager 312-1712
  - amontero@iuhealth.org

- Referrals to Nina Morrison:
  - Phone: 948-9220
  - Fax: 581-1927
  - jmorrison1@iuhealth.org