Conflict of Interest

- Cara Brock declares no conflicts of interest, real or apparent, and no financial interests in any company, product, or service mentioned in this program, including grants, employment, gifts, stock holdings, and honoraria.

Pharmacist Objectives

1. Describe the pathophysiology of opioid induced constipation (OIC).
2. Discuss nonpharmacologic interventions to prevent and manage constipation associated with opioid therapy.
3. Compare current treatment options for the management of opioid-induced constipation.

Pharmacy Technician Objectives

1. Describe the pathophysiology of opioid induced constipation (OIC).
2. Identify patients indicated for nonpharmacologic interventions to prevent and manage constipation associated with opioid therapy.
3. Recognize current treatment options for the management of opioid-induced constipation.

Pain and Opioids

- 3% of adults in the US are on long-term opioid therapy
- 250 million opioid prescriptions filled annually in the US
- Over 50% of cancer patients require opioids

Opioid Adverse Effects

- Sedation, euphoria, delirium
- Respiratory depression
- Suppression of cough reflex
- Nausea & vomiting
- Constipation
- Miosis
- Histamine release

The Hard Truth: Myths and Facts About Opioid Induced Bowel Dysfunction

Dr. Cara M. Brock, PharmD, CGP
Roosevelt University College of Pharmacy
Assistant Professor of Clinical Sciences

Dr. Cara M. Brock, PharmD, CGP
Assistant Professor of Clinical Sciences
Prevalence & Severity of OIC

Impact of Opioid Induced Bowel Dysfunction

Pathophysiology of Opioid Induced Bowel Dysfunction

Bristol-type Stool Assessment Scale

Bowel Function Index

Constipation Assessment Scale
Bowel History

- Last time bowels were moved
- Describe normal bowel habits
- Presence of blood or mucous
- Additional symptoms
- Pain or nausea when moving bowels
- What has been tried to alleviate symptoms

ROME III
Functional Constipation

- Functional constipation: ≥ 2 of the following:
  - Straining
  - Lumpy/hard stool (Bristol 1 & 2)
  - Incomplete evacuation
  - Feeling of anorectal blockage
  - Manual maneuvers
  - < 3 BM per week

Definition
Opioid Induced Constipation

- Change from baseline
- Reduced frequency of spontaneous bowel movements
- Development or worsening of straining
- Incomplete evacuation
- Harder stool consistency

TREATMENT OF OPIOID INDUCED BOWEL DYSFUNCTION

Bulk Forming Laxatives

Stool Softeners
Osmotic Laxatives


Stimulant Laxatives


Chloride Channel Activators


Peripherally Acting Mu-Opioid Receptor Antagonists (PAMORA)

Peripherally Acting Mu-Opioid Receptor Antagonists (PAMORA)


Methylnaltrexone (Relistor®)

http://www.empr.com/alerts/relistor/
### Comparison

<table>
<thead>
<tr>
<th>Medication</th>
<th>NNT +SBMs/week over placebo</th>
<th>Extra BMs/month</th>
<th>Cost (30 days)</th>
<th>Cost per BM</th>
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</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>1</td>
<td>2-7</td>
<td>$13-$39</td>
<td>$1.20-$3.50</td>
</tr>
<tr>
<td>Docusate</td>
<td>N/A</td>
<td>N/A</td>
<td>$36-$532</td>
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<tr>
<td>Senna</td>
<td>N/A</td>
<td>N/A</td>
<td>$6-$19</td>
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</tr>
<tr>
<td>Lubiprostone</td>
<td>12</td>
<td>3</td>
<td>$360</td>
<td>$100</td>
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<tr>
<td>Methylnaltrexone</td>
<td>3-5*</td>
<td>0.6-1.6</td>
<td>$80/dose</td>
<td>$1200-$5000</td>
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<tr>
<td>Naloxegol</td>
<td>5-9.7</td>
<td>0.5-1</td>
<td>$297</td>
<td>$74-$148</td>
</tr>
</tbody>
</table>

*in CNCP patients

Slide courtesy of Dr. Mary Lynn McPherson

### Take Home Points

- **Polyethylene glycol**
- **Docusate**
- **Senna**
- **Lubiprostone**
- **Methylnaltrexone**
- **Naloxegol**

### Speaker Contact Information

Cara M. Brock, PharmD, CGP
cbrock@roosevelt.edu

www.squattypotty.com