Drug Information

Baclofen Used for the Reduction of Alcohol Craving
Shaelah Easterday, PharmD

Anti-Craving Medications
- Naltrexone
  - CI hepatic failure
  - No concomitant opioid use

Acamprosate
- CI renal failure
- GI side effects

Disulfiram
- Cautioned in multiple disease states
- “Hidden” alcohol

Baclofen
- GABA\(_\beta\) agonist

The Evidence
3 Randomized Controlled Trials

<table>
<thead>
<tr>
<th>Addolorato et al</th>
<th>Garbutt et al</th>
<th>Addolorato et al</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstinence: 71% vs 29% (p=0.0001)</td>
<td>Abstinence: 51.7% vs 51.6% (p=0.61)</td>
<td>Abstinence: 70% vs 21.2% (P&lt;0.005)</td>
</tr>
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</table>

Cirrhosis

<table>
<thead>
<tr>
<th>Baclofen 10mg TID vs Placebo</th>
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Take Home Points:
- Baclofen 30—60 mg daily may be safe and effective for the treatment of alcohol-dependent individuals:
  - With normal renal function
  - With or without advanced liver disease
  - Who have not been diagnosed with a psychiatric illness
  - Who do not have a history of seizures

Clinical Service

Travel Vaccines Offered at Bartell Drugs
Mark Amoo PharmD (Bartell Drugs)

An innovative service that we provide here at Bartell Drugs is an International Travel Clinic. We have a collaborative drug therapy agreement (CDTA) at Bartell Drugs that allows us to prescribe and administer appropriate vaccines needed to travel overseas to countries in Africa and Southeast Asia. We are able to administer all travel vaccines including yellow and typhoid fever. In addition to vaccines, our CDTA allows us to dispense preventative medications for malaria as well as antibiotics to treat traveler’s diarrhea.

Patient's generally come to Bartell Drugs for a travel consult because they know we offer the service, but we have also seen several physician referrals. We encourage travelers to come in for the initial consult 6-8 weeks before their travel date, but sometimes they will present as late as a few weeks before they depart. The initial consult usually lasts about 30-45 minutes, and we spend the majority of this time discussing the patient’s travel plans and medical history. Patients generally express extreme gratitude for the service, because it is convenient for them to schedule and they are comfortable meeting with their Bartell’s Pharmacist whom they already trust.

Clinical Service

A Pharmacy Resident Led Diabetes Clinic
By Shaelah Easterday, PharmD (Providence Pharmacy Monroe)

Diabetes is a difficult disease to manage. Treatment involves a combination of lifestyle changes and medications. For many patients, this is a daunting task that requires close follow-up. The pharmacy residents at Providence Pharmacy Monroe provide a terrific service that allows providers to refer their patients for diabetes medication management. While enrolled in the service, patients receive individualized care whether it be through office visits, phone appointments, or secure e-mail messaging. This service strives to provide patients with the best care possible. Because diabetes management can be very costly, the pharmacy residents also develop the most cost-effective plan for patients so that they can better focus on their health.

This pharmacy resident led diabetes clinic ultimately touches on all three corners of the Providence Triple-Aim:
**Drug Information**

Clinically significant drug-drug interactions and management in the use of acid suppressing medications

*John Doric, PharmD*

<table>
<thead>
<tr>
<th>Acid neutralizers</th>
<th>Maalox/Tums/Rolaids</th>
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</thead>
<tbody>
<tr>
<td>Histamine II receptor antagonists (H2RA)</td>
<td>Ranitidine, famotidine, cimetidine</td>
</tr>
<tr>
<td>Proton pump inhibitors</td>
<td>Omeprazole, esomeprazole, lansoprazole, rabeprazole, pantoprazole</td>
</tr>
</tbody>
</table>

### Mechanism

**Binding**

Ca/Mg/Al in acid neutralizers will form insoluble complex with drug and prevent them from working

**pH**

All acid reducing medications cause increase in pH. This inhibits some drugs from absorbing/dissolving.

**Metabolism inhibition**

All proton pump inhibitors and also cimetidine can interfere with specific drug metabolism

### Interacting medications

**Tetracyclines**

<table>
<thead>
<tr>
<th>Drug type</th>
<th>% decreased total drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetracycline</td>
<td>50-90%</td>
</tr>
<tr>
<td>Doxycycline</td>
<td>50-90%</td>
</tr>
</tbody>
</table>

**Fluoro-quinolones**

<table>
<thead>
<tr>
<th>Drug type</th>
<th>% decreased total drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ciprofloxacin</td>
<td>50-90%</td>
</tr>
<tr>
<td>Levofloxacin</td>
<td>50-90%</td>
</tr>
<tr>
<td>Moxifloxacin</td>
<td>50-90%</td>
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**Antifungals**

<table>
<thead>
<tr>
<th>Drug type</th>
<th>% decreased total drug</th>
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<tbody>
<tr>
<td>Ketoconazole</td>
<td>Solution 0% Tablet 40%</td>
</tr>
<tr>
<td>Itraconazole</td>
<td>Solution 0% Tablet 66%</td>
</tr>
</tbody>
</table>

**HIV protease inhibitors**

<table>
<thead>
<tr>
<th>Drug type</th>
<th>% changed concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atazanavir, Rilpivirine Indinavir, Nelfinavir</td>
<td>50-90%</td>
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</tbody>
</table>

**Other**

<table>
<thead>
<tr>
<th>Drug type</th>
<th>% changed concentration</th>
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<tbody>
<tr>
<td>Levothyroxine</td>
<td>20-25%</td>
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</table>

**Iron**

<table>
<thead>
<tr>
<th>Drug type</th>
<th>% changed concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>(use ferric gluconate)</td>
<td>Gluconate 0% Sulfate/Fumarate 60%</td>
</tr>
</tbody>
</table>

**Calcium carbonate**

<table>
<thead>
<tr>
<th>Drug type</th>
<th>% changed concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>(use calcium citrate/gluconate)</td>
<td>Reduced absorption.</td>
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</tbody>
</table>

### Management of problem

**Administer acid neutralizer 4 hours earlier or 2 hours later than above antibiotics**

**Alternative:** consider use of a H2RA or PPI as these do not cause drug interactions

**Avoid taking medications with foods high in calcium (such as dairy) as these also have large amounts of calcium present**

**Avoid co-administration with acid reducing drugs.**

**Use acid neutralizer 4 hours earlier or 2 hours later**

**Ranitidine has a duration of 4-12 hours and may be spaced**

**PPI’s have extended durations/cannot be spaced**

**Avoid use of a PPI with clopidogrel in low risk GI bleeding patients.**

**Preferred agents are Ranitidine = famotidine = acid neutralizer, then pantoprazole if first agents are ineffective**
The patient care model is once again on the brink of evolution, and it is no secret that payers are moving towards reimbursing those health care systems for their quality of care rather than on a “fee-for-service” model. This holds true for all disciplines of medicine including pharmacy. While this idea of “pay-for-performance” has been around for prescribers and health-systems for several years, it was the establishment of the Affordable Care Act that strengthened this notion throughout all disciplines of medicine.¹

Defining quality can be a difficult task, and to complicate matters there are hundreds of quality measures developed by several national census-based organizations.¹ As a pharmacist, it is important to keep in mind which organization you are being evaluated by and which measures are applicable to your practice. One of the most notorious quality measure systems in today’s pharmacy realm is the Star Rating. Star Ratings have been a hot topic among health professionals because of the huge implications they have, but what exactly are Star Ratings and how are they related to pharmacies?

The Star Rating scale is a system of quality measurement established by the Centers for Medicare and Medicaid Services (CMS) to rank the quality of service provided by Third Party Payers (TPP), namely those who provide Medicare services, based on several factors. A Star Rating of 1 through 5 is given to these TPP with a 1 being poor service, 3 being average service and 5 being excellent service. The individual Star Ratings of these TPP are displayed on the CMS website for consumers to view and use to make a decision on which company to purchase coverage with.¹²

There are currently 36 measures used to rank Medicare Part C and 15 measures to rank Medicare Part D plans. The measures used to rank these plans are separated into domains that focus on areas such as customer service, member experience and in regards to pharmacy, patient safety and accuracy of drug pricing. Some examples of the measures included in the patient safety and accuracy of drug pricing domain include appropriate use of high-risk medications in the elderly, use of certain medications in patients with diabetes and hypertension and adherence to diabetes medications. CMS set standards of how to assess these measures and provides the plan with an overall Star Rating based on these metrics.¹

There are several reasons why a TPP should be conscious of their Star Rating. As previously mentioned, Star Ratings are available to the public on the CMS website. Consumers can choose their plan based on a TPP’s star rating, and so displaying a suboptimal rating could be detrimental to the company’s profitability. In addition, if a TPP has an overall Star Rating less than 3 for multiple years in a row, they can be dropped from providing Medicare services altogether. Likewise, plans that consistently have high Star Ratings may receive incentives from CMS.¹

So what does all of this mean for pharmacists? Since pharmacists are the direct link to patients and their medications, TPP are turning towards pharmacies to help manage their patients.³ Pharmacists can directly affect and improve Star Rating measures that deal with medication use, safety and adherence. TPP are taking note and are now turning towards including only those pharmacies that positively impact their Star Ratings in their preferred network.¹ Even though as pharmacists we do not receive Star Ratings, we can directly impact the ratings of TPP and this will have major implications for us in the future.


Clinical Service

Anticoagulation Services
John Doric, PharmD (Providence Pharmacy Monroe)

One of the new changes that recently happened at the Providence Monroe site was expanded anticoagulation services to all patients within each individual clinic, whether it is Monroe, Everett, Marysville or Mill Creek. Providence now also uses pharmacists, nurses, and health unit coordinators as part of an expanded and shared role. From these changes we have increased our patient census to approximately 1415 system wide from 850. Much of this growth was due to updated referrals, however increase teamwork overall has helped the Providence anticoagulation clinic increase its productivity. Health unit coordinators management of patient calls and scheduling has allowed each individual to practice at the top of their respective training. Pharmacists are now more available to serve high risk patients with consults like bridging at each Providence anticoagulation clinic at least one day a week. The pharmacist resident allows for exceptional patient access to anticoagulation services as well; with two anticoagulation clinic days as well as fill in appointments on weekdays and occasional weekends.

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