Antidepressants
Antidepressants for Youth
Learning Objectives

• FDA approved antidepressants
• Approximate costs of antidepressants
• Antidepressant Algorithm
• SSRI common Side-effects
• Serotonin Syndrome Symptoms
FDA approved for the treatment of youth depression?

a) Buproprion (Wellbutrin)
b) Citalopram (Celexa)
c) Doxepin (Sinequan)
d) Duloxetine (Cymbalta)
e) Escitalopram (Lexapro)
f) Fluoxetine (Prozac)
g) Mirtazepine (Remeron)
h) Sertraline (Zoloft)
i) Venlafaxine (Effexor)
FDA Approved Antidepressants

a) Bupropion (Wellbutrin) no
b) Citalopram (Celexa) no
c) Doxepine (Sinequan) YES (12+ years)
d) Duloxetine (Cymbalta) no (Yes for Anxiety 7+ years)
e) Escitalopram (Lexapro) YES (12+ years)
f) Fluoxetine (Prozac) YES (8+ years)
g) Mirtazepine (Remeron) no
h) Sertraline (Zoloft) no (Yes for OCD 6+ years)
i) Venlafaxine (Effexor) no
SSRI Common Side-effects

- Stuffy Nose, sneezing, sore throat
- Drowsiness, dizziness, nervousness
- Nausea, upset stomach, constipation
- Appetite & weight changes
- Insomnia
- Sexual dysfunction
- Dry mouth
Serotonin Syndrome Symptoms

**Common Symptoms**
- Agitation or restlessness
- Confusion
- Rapid heart rate and high blood pressure
- Dilated pupils
- Loss of muscle coordination or twitching muscles
- Muscle rigidity
- Heavy sweating
- Diarrhea
- Headache
- Shivering
- Goose bumps

**Severe Symptoms**
- Severe serotonin syndrome can be life-threatening. Signs and symptoms include:
  - High fever
  - Seizures
  - Irregular heartbeat
  - Unconsciousness
Which antidepressants cost less than Escitalopram (Lexapro)?

a) Bupropion (Wellbutrin)
b) Citalopram (Celexa)
c) Doxepine (Sinequan)
d) Duloxetine (Cymbalta)
e) Fluoxetine (Prozac)
f) Mirtazepine (Remeron)
g) Sertraline (Zoloft)
h) Venlafaxine (Effexor)
Antidepressant Cost (Epocrates-11/8/16)

a) Buproprion (Wellbutrin) 300 mg (#30) = $146
b) Citalopram (Celexa) 40 mg (#30) = $24
c) Doxepine (Sinequan) 300 mg (#30) = $120*
d) Duloxetine (Cymbalta) 120 mg (#30) = $640*
e) Escitalopram (Lexapro) 40 mg (#30) = $24
f) Fluoxetine (Prozac) 80 mg (#30) = $98*
g) Mirtazepine (Remeron) 45 mg (#30) = $67
h) Sertraline (Zoloft) 200 mg (#30) = $216*
i) Venlafaxine (Effexor) mg (#30) $306*

*cost includes two tabs
Which is more effective?

• Medications alone
• Psychotherapy alone
• Medications + Psychotherapy
### Treatment of Depression Study (TADS) (Emslie, et al---2004)

- **Multisite study**
- **N = 439**
- **Subject ages 12-17 years**
- **12 week treatment**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>35%</td>
</tr>
<tr>
<td>Psychotherapy Alone (CBT)</td>
<td>43%</td>
</tr>
<tr>
<td>Medications Alone</td>
<td>61%</td>
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<tr>
<td>Medication + Psychotherapy</td>
<td>71%</td>
</tr>
</tbody>
</table>
OPAL-K Antidepressant Algorithm
(based on Texas Algorithm)

- SSRI (fluoxetine or escitalopram)
- Another SSRI (escitalopram, fluoxetine, sertraline, citalopram)
- Non-SSRIs – venlafaxine (Effexor), bupropion (Wellbutrin), mirtazapine (Remeron), or duloxetine (Cymbalta)
References

• Up to Date Overview of Depression Treatment

• Treatment of Adolescent Depression (TADS)

• Medication Guide for Parents
  http://www.parentsmedguide.org/parentsmedguide.pdf

• Texas Algorithm
Thank You