

PRESCRIBING DIRECTIONS FOR PSYCHOTROPIC MEDICATIONS

This brief information is provided to facilitate the use of these medications and is NOT intended to replace the information provided in the FDA labeling information. For any questions, please consult with your pharmacist or review FDA labeling information available at Drugs@FDA. Last updated 01/01/2012 by the [AIMS Center](#) at the University of Washington.

ANTIDEPRESSANTS:

AMITRIPTYLINE (ELAVIL)

DOSING INFORMATION: **Initiation:** Week 1: Baseline EKG (if any history of cardiac disease, history of arrhythmias, or over 65 y/o), BP, HR, weight. Consider BMP for baseline sodium in older adults. Start: 25 mg-50 mg at QHS. Week 2 and beyond: increase dose by 25-50 mg per day each week to **initial target dosage** of 150-200 mg/day (with the majority of the dosage at HS due to sedation). **Max dosage:** 300 mg/day.

MONITORING: EKG (pretreatment, initial, and annual—if any history of cardiac disease, history of arrhythmias or over 65 y/o), BP, HR, weight. Consider posttreatment BMP to rule out hyponatremia in older adults. Blood test for serum level available with defined therapeutic range (amitriptyline + nortriptyline): 100-250 ng/mL; Toxic: >500 ng/mL.

GENERAL INFORMATION: **Mechanism of Action:** TCA: serotonin > NE reuptake inhibitor. **FDA Indications:** Depression. **Off-Label Indications:** pain (doses up to 100 mg); second-line RX for PTSD. **Pharmacokinetics:** T_{1/2}: 9-27 hrs. **Common Side Effects:** Highly sedating and anticholinergic (blurred vision, urinary retention, dry mouth, constipation—more so than nortriptyline); orthostatic hypotension, weight gain, sexual side effects, headache. **Warnings and Precautions:** Highly lethal in small overdoses (10-day supply), serotonin syndrome, orthostatic hypotension, cardiac dysrhythmia, QTc prolongation, seizures, manic switch, hepatic changes, decreased blood cell count, hyperthermia, **increased** intraocular pressure, urinary retention, SIADH; hyperthyroidism/thyroid supplementation. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI, acute recovery period after MI. **Black Box Warning:** Increased SI in patients <25 y/o. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk).** **Breastfeeding:** use caution. **Significant drug-drug interactions:** medications that affect QTc; check all drug-drug interactions. **Generic available:** Yes.

BUPROPION (WELLBUTRIN, APLENZIN, ZYBAN): IR—IMMEDIATE RELEASE, SR, XR—SUSTAINED RELEASE

DOSING INFORMATION: **Wellbutrin-IR:** Week 1: Baseline blood pressure. Consider BMP for baseline sodium in older adults. Start: IR-100 mg bid. Week 2: Increase to 100 mg tid if tolerated (single dose should not exceed 150 mg). **Wellbutrin-SR:** Week 1: Baseline blood pressure: Start: SR-150 mg qAM. Week 2: Increase to 150 mg bid if tolerated. **Wellbutrin-XL:** Week 1: Baseline blood pressure. Start: XL-150 mg qAM. Week 2: Increase to 300 mg qAM if tolerated. **Note:** Aplenzin has a different titration. **Typical target:** 300-450 mg/day. **Max:** 400-450 mg qday.

MONITORING: Blood pressure. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Wellbutrin has a novel mechanism of action (weak dopamine and NE reuptake inhibitor; stimulant like effect). **FDA Indications:** Depression, season affective disorder (prophylaxis), smoking cessation. **Off-Label Indications:** Second line RX for ADHD. **Pharmacokinetics:** T_{1/2} = 21 hr. **Common Side effects:** Dry mouth (24%), tremor (21%), weight loss (19%), nausea (18%), insomnia (16%), dizziness (11%), abdominal pain (9%), agitation (9%), anxiety (6%), palpitation (6%), tinnitus (6%), myalgia (6%), excessive sweating (5%). **Warnings and Precautions:** Hypertension, altered appetite and weight, history of TBI, suicidality, agitation or insomnia, activation of psychosis or manic switch, potential for hepatotoxicity, renal impairment, street value. **Contraindications:** Known hypersensitivity reaction to the product. Seizure disorder,

bulimia or anorexia nervosa, abrupt discontinuation of alcohol or benzodiazepines, use of MAOI or within 14 days of stopping a MAOI. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Use caution. **Significant drug-drug interactions:** Minimal; check all drug-drug interactions. **Generic available:** IR, SR, XL: moderate cost.

CITALOPRAM (CELEXA)

DOSING INFORMATION: Week 1: Baseline weight. Consider BMP for baseline sodium in older adults and baseline QTc in all patients. Start Celexa 10 mg qday. Week 2: Increase dose to 20 mg qday. Week 3 and beyond: Consider further titration upward to 40 mg qday as tolerated (except in older adults). **Typical target dosage:** 40 mg/day. **Max dosage:** 40 mg qday (older adults 20 mg qday).

MONITORING: Weight, consider posttreatment BMP to rule out hyponatremia in older adults and posttreatment QTc in all patients.

GENERAL INFORMATION: Mechanism of Action: Highly selective serotonin reuptake inhibitor. **FDA Indications:** Depression **Off-label indications:** Anxiety disorders. **Pharmacokinetics:** T_{1/2}= 35 hrs. **Common Side effects:** Nausea (21%), dry mouth (20%), somnolence (18%), sexual side effects/ejaculatory dysfunction (6%). **Warnings and Precautions:** QTc prolongation, suicidality, manic switch, serotonin symptoms or NMS, abnormal bleeding, hyponatremia, discontinuation syndrome. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI or pimozide. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Use caution. **Significant drug-drug interactions:** Minimal; check all drug-drug interactions. **Generic available:** Yes/inexpensive.

CLOMIPRAMINE (ANAFRANIL)

DOSING INFORMATION: Initiation: Week 1: Baseline EKG (if any history of cardiac disease, history of arrhythmias, or over 65 y/o), HR, BP, weight. Consider BMP for baseline sodium in older adults. Start: 25mg QHS—should be given with food and dose may be divided to limit GI effects. Week 2: increase to 50 mg QHS. Week 3: increase to 75 mg QHS. Week 4: increase dose to **initial target dosage** of 100 mg QHS. **Max dosage:** 250 mg/day.

MONITORING: EKG (pretreatment, initial, and annual—if any history of cardiac disease, history of arrhythmias or over 65 y/o), HR, BP, weight. Consider posttreatment BMP to rule out hyponatremia in older adults. Blood test for serum level available with defined therapeutic range: 150-300 ng/mL; Toxic >500 ng/mL.

GENERAL INFORMATION: Mechanism of Action: TCA: serotonin >> NE reuptake inhibitor. **FDA Indications:** OCD. **Off-Label Indications:** Depression. **Pharmacokinetics:** T_{1/2}: 32 hr. **Common Side effects:** dry mouth (84%), somnolence (54%), dizziness (54%), tremor (54%), constipation (47%), fatigue (39%), GI Upset/nausea (33%), sweating (29%), sexual side effects (21%), weight gain (18%), nervousness (18%, increased appetite (11%).

Warnings and Precautions: Highly lethal in small overdoses (10-day supply), serotonin syndrome, orthostatic hypotension, cardiac dysrhythmia, QTc prolongation, seizures, manic switch, hepatic changes, decreased blood cell count, hyperthermia, **increased** intraocular pressure, urinary retention, SIADH; hyperthyroidism/thyroid supplementation. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI; acute recovery period after MI. **Black Box Warning:** increased SI in patients <25 y/o. **Pregnancy:** Category C. **Breastfeeding:** use caution. **Significant drug-drug interactions:** medications that affect QTC; Check all drug-drug interactions. **Generic available:** Yes.

DESIPRAMINE (NORPRAMIN)

DOSING INFORMATION: Week 1: Baseline EKG (if any history of cardiac disease, history of arrhythmias, or over 65 y/o), HR, BP, weight. Consider BMP for baseline sodium in older adults. Start 25 mg-50 mg at qday (10-25 mg in older adults); May be given at night. Week 2 and beyond: Increase dose by 25-50 mg per day each week to and **initial target dosage** of 100-200 mg (100 mg for older adults). **Max:** 300 mg (150 mg older adults).

MONITORING: EKG (pretreatment, initial, and annual—if any history of cardiac disease, history of arrhythmias or over 65 y/o), pulse, BP, weight. Consider posttreatment BMP to rule out hyponatremia in older adults. Blood test for serum level available with defined therapeutic range: 115-250ng/mL; Toxic > 500ng/mL

GENERAL INFORMATION: Mechanism of Action: TCA: NE >> serotonin reuptake inhibitor. **FDA Indications:** Depression. **Off-Label Indications:** ADHD, neuropathic pain. **Pharmacokinetics:** T_{1/2} = 24 hr. **Common Side effects:** Anticholinergic (least of the group of TCAs), weight gain, GI upset, sexual side effects, somnolence,

headache. **Warnings and Precautions:** Highly lethal in small overdoses (10-day supply), serotonin syndrome, orthostatic hypotension, cardiac dysrhythmia, QTc prolongation, seizures, manic switch, hepatic changes, decreased blood cell count, hyperthermia, increased intraocular pressure, urinary retention, SIADH.

Contraindications: Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping MAOI; acute recovery period after MI. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Unsafe. **Significant drug-drug interactions:** Medications that affect QTc; check all drug-drug interactions **Generic available:** Yes, expensive.

DESVENLAFAXINE (PRISTIQ)

DOSING INFORMATION: Week 1: Obtain blood pressure and weight. Consider BMP for baseline sodium in older adults. Start Pristiq 50 mg qday. **Typical titration:** None. **Typical target dosage:** 50 mg qday. **Max dosage:** Doses greater than 50 mg are rarely beneficial. **Discontinuation:** Taper slowly to minimize withdrawal symptoms.

MONITORING: Blood pressure, weight. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Serotonin/Norepinephrine Reuptake Inhibitor (SNRI). **FDA Indications:** MDD. **Off-Label Indications:** None. **Pharmacokinetics:** T_{1/2} = 11hr. **Common Side effects:** Nausea (22%), dizziness (13%), hyperhidrosis (10%), insomnia (9%), constipation (9%), decreased appetite (5%), anxiety (5%), specific male sexual function disorders (5%). **Warnings and Precautions:** Suicidality, manic switch, serotonin symptoms or NMS, abnormal bleeding, elevated blood pressure, hyponatremia, narrow angle glaucoma, elevated cholesterol and triglycerides, discontinuation syndrome. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Safety unknown. **Significant drug-drug interactions:** Minimal; abnormal bleeding with NSAIDs or anticoagulants; check all drug-drug interactions. **Generic available:** No.

DOXEPIN (SINEQUAN)

DOSING INFORMATION: Week 1: Baseline EKG (if any history of cardiac disease, history of arrhythmias, or over 65 y/o), HR, BP, weight. Consider BMP for baseline sodium in older adults. Start 25 mg-50 mg qhs (10-25 mg in older adults). Week 2 and beyond: Increase dose by 25-50 mg per day each week to initial target 75-150 mg qhs (75 mg for older adults). **Typical target dosage:** 150 mg (75mg for older adults). **Max:** 300 mg/day (up to 150mg in single dose).

MONITORING: EKG (pretreatment, initial, and annual—if any history of cardiac disease, history of arrhythmias or over 65 y/o), BP, HR, weight. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Sedating TCA: serotonin/NE reuptake inhibitor. **FDA Indications:** Depression-Anxiety. **Off-Label Indications:** Insomnia, chronic Pain, urticaria. **Pharmacokinetics:** T_{1/2} = 6-8hr; major metabolite 24-52hr. **Common Side effects:** Sedating and anticholinergic (blurred vision, urinary retention, dry mouth, constipation), orthostatic hypotension, weight gain, sexual side effects, headache. **Warnings and Precautions:** Highly lethal in small overdoses (10-day supply), serotonin syndrome, orthostatic hypotension, cardiac dysrhythmia, QTc prolongation, seizures, manic switch, hepatic changes, decreased blood cell count, hyperthermia, increased intraocular pressure, urinary retention, SIADH. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI; acute recovery period after MI. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Unsafe. **Significant drug-drug interactions:** Medications that affect QTc; check all drug-drug interactions. **Generic available:** Yes.

DULOXETINE (CYMBALTA)

DOSING INFORMATION: Week 1: Obtain blood pressure and weight. Consider BMP for baseline sodium in older adults. Start Cymbalta 30 mg qday. Week 2: Assess for side effects; Increase dose to Cymbalta 30mg bid. **Typical target dosage:** 60 mg qday (either single dose or 30mg BID). **Max dosage:** 120 mg qday (little evidence that higher doses are beneficial). **Discontinuation:** Taper slowly to minimize withdrawal symptoms

MONITORING: Blood pressure, weight. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Serotonin/Norepinephrine Reuptake Inhibitor (SNRI). **FDA**

Indications: MDD, GAD, diabetic peripheral neuropathic pain, fibromyalgia; pain. **Off-Label Indications:** Second-line ADHD, other pain, other anxiety. **Pharmacokinetics:** $T_{1/2} = 12$ hrs. **Common Side effects:** nausea (24%), dry mouth (13%), somnolence (10%), fatigue (10%), constipation (10%), decreased appetite (8%), and hyperhidrosis (7%). **Warnings and Precautions:** Suicidality, hepatotoxicity- substantial alcohol use or evidence of chronic liver disease, orthostatic hypotension, serotonin syndrome, NMS, manic switch, seizures, increased BP, increased blood sugar and total cholesterol, slow gastric emptying, urinary retention. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI; Uncontrolled narrow angle glaucoma. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Safety unknown. **Significant drug-drug interactions:** Moderate CYP450; Avoid CYP1A2 inhibitors; Abnormal bleeding with NSAIDs or anticoagulants; Check all drug-drug interactions. **Generic available:** No.

ESCITALOPRAM (LEXAPRO)

DOSING INFORMATION: Week 1: Baseline weight. Consider BMP for baseline sodium in older adults). Start: 5 mg qday. Week 2: Assess for side effects; Increase dose to 10 mg qday, if tolerated. **Typical target dosage:** 10 mg qday. **Max:** 20 mg qday. **Discontinuation:** Taper slowly to minimize withdrawal symptoms.

MONITORING: Weight. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Highly selective serotonin reuptake inhibitor; S-enantiomer of the racemic derivative of citalopram. **FDA Indications:** MDD, GAD. **Off-Label Indications:** Other anxiety disorders. **Pharmacokinetics:** $T_{1/2} = 27-32$ hrs. **Common Side effects:** nausea (18%), ejaculation disorder (14%, primarily ejaculatory delay), insomnia (12%), somnolence (13%), fatigue (8%), decreased libido (7%), anorgasmia (6%), sweating increased (5%). **Warnings and Precautions:** Increased suicidality, serotonin syndrome, NMS, seizures, manic switch, hyponatremia. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI or pimozone. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Use caution. **Significant drug-drug interactions:** Minimal, abnormal bleeding with NSAIDs or anticoagulants; Check all drug-drug interactions. **Generic available:** No.

FLUOXETINE (PROZAC, SARAFEM)

DOSING INFORMATION: Week 1: Baseline weight. Consider BMP for baseline sodium in older adults. Start 10 mg qday. Week 2: Increase dose to 20 mg qday, if tolerated. Week 4 and beyond: Consider further titration in 10-20 mg qday increments. **Typical target dosage:** 20 mg qday (for geriatric patients, a lower initial dose or longer dosing interval is recommended). **Max:** 80 mg qday.

MONITORING: Weight. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Selective serotonin reuptake inhibitor. **FDA Indications:** MDD, OCD, panic disorder, bulimia nervosa, premenstrual dysphonic disorder. **Off-Label Indications:** Other anxiety, fibromyalgia. **Pharmacokinetics:** $T_{1/2}$ parent = 4-6 days, metabolite = 9.3 days. **Common Side effects:** Insomnia (33%), nausea (29%), weakness(21%), diarrhea (18%), somnolence (17%), anorexia (17%), nervousness (15%), anxiety (15%), tremor (13%), dry mouth (12%), libido decreased (11%), yawn (11%), dyspepsia (10%), sweating (7%), sexual side effects (7%), vasodilatation (5%), abnormal dreams (5%). **Warnings and Precautions:** Increased suicidality, serotonin syndrome, NMS, manic switch, seizures, significant weight loss, abnormal bleeding, hyponatremia, anxiety, insomnia, long half-life, narrow angle glaucoma. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI, pimozone, thioridazine. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Of concern; Not recommended by manufacturer. **Significant drug-drug interactions:** Moderate to significant CYP 450 effects; tamoxifen; Check all drug-drug interactions. **Generic available:** Yes, Inexpensive.

FLUVOXAMINE (LUVOX): IR—IMMEDIATE RELEASE, CR—SUSTAINED RELEASE

DOSING INFORMATION: Luvox IR: Week 1: Baseline weight. Consider BMP for baseline sodium in older adults. Start IR: 50 mg qhs. Week 2: Increase to 100 mg qhs. Week 3-4 and beyond: Consider further increases in 50 mg increments qhs q3-4 weeks. **Luvox CR:** Week 1: Baseline weight. Consider BMP for baseline sodium in older adults. Start CR: 100 mg QHS. Week 3-4 and beyond: Consider further increases in 50 mg increments q3-4 weeks. **Typical target dosage:** IR/CR 100 mg qhs. **Max dosage:** 300 mg/day. **Discontinuation:** Taper slowly to

minimize withdrawal symptoms.

MONITORING: Weight. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Selective serotonin reuptake inhibitor. **FDA Indications:** OCD.

Off-Label Indications: Depression, other anxiety. **Pharmacokinetics:** $T_{1/2}$ = 15-16hr. **Common Side effects:** Nausea (39%), insomnia (35%), somnolence (27%), diarrhea (18%), dizziness (15%), anorexia (14%), abnormal ejaculation (11%), dyspepsia (10%), tremor (8%), anxiety (8%), sweating (7%), vomiting (6%), anorgasmia (5%), myalgia (5%). **Warnings and Precautions:** Multiple drug-drug interactions; increased suicidality, serotonin syndrome, NMS, manic switch, seizures, discontinuation, abnormal bleeding, hyponatremia, concern for increased risk of diabetes with long term use. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI, thioridazine, tizanidine, pimozide, alosetron, or ramelteon. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Of concern. **Significant drug-drug interactions: POTENT INHIBITOR CYP1A2 AND CYP3A4 INHIBITOR WHICH CAN LEAD TO DANGEROUS DRUG ELEVATIONS; CHECK ALL MEDICATION COMBINATIONS;** Check all drug-drug interactions **Generic available:** IR: Yes, Expensive; CR: No.

IMIPRAMINE (TOFRANIL)

DOSING INFORMATION: Week 1: Baseline EKG (if any history of cardiac disease, history of arrhythmias, or over 65 y/o), pulse, BP, weight. Consider BMP for baseline sodium in older adults. Start 25 mg-50 mg qhs (10-25 mg in older adults). **Week 2 and beyond:** Increase dose by 25-50 mg per day each week to initial target 100-200 mg (100 mg for older adults). **Max:** 300mg (up to 150 mg in single dose).

MONITORING: EKG (pretreatment, initial, and annual—if any history of cardiac disease, history of arrhythmias or over 65 y/o), HR, BP, weight. Consider posttreatment BMP to rule out hyponatremia in older adults. Blood test for serum level available with defined therapeutic range: 150-300 ng/mL; Toxic >500 ng/mL.

GENERAL INFORMATION: Mechanism of Action: TCA: serotonin > NE reuptake inhibitor. **FDA Indications:** Depression. **Off-Label Indications:** Second-line PTSD. **Pharmacokinetics:** $T_{1/2}$ = 6-18 hr. **Common Side effects:** Anticholinergic (moderate of the group of TCAs), weight gain, GI Upset, sexual side effects, somnolence, headache. **Warnings and Precautions:** Highly lethal in small overdoses (10-day supply), serotonin syndrome, orthostatic hypotension, cardiac dysrhythmia, QTc prolongation, seizures, manic switch, hepatic changes, decreased blood cell count, hyperthermia, increased intraocular pressure, urinary retention, SIADH.

Contraindications: Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI; acute recovery period after MI. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk).** **Breastfeeding:** Use caution. **Significant drug-drug interactions:** Medications that affect QTC; check all drug-drug interactions. **Generic available:** Yes, moderate price.

MIRTAZAPINE (REMERON)

DOSING INFORMATION: Week 1: Baseline weight. Consider BMP for baseline sodium in older adults. Start 15 mg qhs (7.5 mg qhs for elderly). **Week 2:** Increase to 30 mg qhs (15 mg qhs for elderly) **Typical target dosage:** 30 mg qhs. **Max:** 45 mg qhs. **Discontinuation:** Taper slowly to minimize withdrawal symptoms.

MONITORING: Weight, lipids. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Novel; central pre-synaptic α_2 -adrenergic antagonist effects, which results in increased release of norepinephrine and serotonin. **FDA Indications:** MDD. **Off-Label Indications:** Other anxiety, neuropathic pain, anti-nausea effect (similar mechanism to odansetron).

Pharmacokinetics: $T_{1/2}$ = 26 hrs (females)-37 hrs (males). **Common Side effects:** Somnolence (54%), dry mouth (25%), increased appetite (17%), constipation (13%), weight gain (12%), dizziness (7%). **Warnings and Precautions:** Increased suicidality, serotonin syndrome, manic switch, agranulocytosis (avoid in immunocompromised), discontinuation, hyponatremia, akathisia, increased cholesterol/triglycerides, transaminase elevations, seizures. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Use caution, safety unknown. **Significant drug-drug interactions:** Minimal; Check all drug-drug interactions. **Generic available:** Yes, Moderately expensive.

NORTRIPTYLINE (PAMELOR, AVENTYL)

DOSING INFORMATION: Week 1: Baseline EKG (if any history of cardiac disease, history of arrhythmias, or over 65 y/o), HR, BP, weight. Consider BMP for baseline sodium in older adults. Start 25 mg-50 mg at QHS (10-25 in older adults). Week 2 and beyond: Increase dose by 25-50 mg per day each week to **initial target dosage** of 75-100 mg (50 mg for older adults). **Max Dosage:** 150 mg/day (older adults 100 mg).

MONITORING: EKG (pretreatment, initial, and annual—if any history of cardiac disease, history of arrhythmias or over 65 y/o), BP, HR, weight. Consider posttreatment BMP to rule out hyponatremia in older adults. Blood test for serum level available with defined therapeutic range: 50-150 ng/ml; toxic >500 ng/ml.

GENERAL INFORMATION: Mechanism of Action: TCA: NE > serotonin reuptake inhibitor. Generally better tolerated than other TCAs. **FDA Indications:** Depression. **Off-Label Indications:** neuropathic pain (doses up to 75mg); ADHD. **Pharmacokinetics:** T_{1/2} 28-31 hours. **Side effects: Common:** sedating and anticholinergic (blurred vision, urinary retention, dry mouth, constipation), orthostatic hypotension, weight gain, nausea, headache, sexual side effects. **Warnings and Precautions:** Highly lethal in small overdoses (10-day supply), serotonin syndrome, orthostatic hypotension, cardiac dysrhythmia, QTC prolongation, seizures, manic switch, hepatic changes, decreased blood cell count, hyperthermia, increased intraocular pressure, urinary retention, SIADH. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI; Acute recovery period after MI. **Black Box:** Increased SI in patients <25 y/o. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk).** **Breastfeeding:** Use caution. **Significant drug-drug interactions:** Medications that affect QTC; Check all drug-drug interactions. **Generic available:** Yes.

PAROXETINE (PAXIL CR, PAXIL, PEXEVA): IR: IR—IMMEDIATE RELEASE (PAXIL, PEXEVA), CR—SUSTAINED RELEASE

DOSING INFORMATION: **Paxil IR:** Week 1: Baseline weight. Consider BMP for baseline sodium in older adults. Start 10 mg qday. Week 2: Increase to 20 mg qday, if tolerated. Week 4 and beyond: Consider further increases as needed in 10 mg qday per week increments. **Paxil CR:** Week 1: Baseline weight. Consider BMP for baseline sodium in older adults. Start 25 mg qday. Week 4 and beyond: Consider further increases as needed in 12.5 mg qday per week increments. **Typical target:** IR: 20 mg qday (40 mg qday for OCD); CR: 25 mg qday. **Max dosage:** IR: 50 mg qday CR: 62.5mg qday. **Discontinuation:** *Often problematic.* Taper slowly to minimize withdrawal symptoms.

MONITORING: Weight. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Potent selective serotonin reuptake inhibitor which is quite anticholinergic. **FDA Indications:** GAD, MDD, OCD, Panic Disorder, PTSD, PMDD, Social Phobia.

Pharmacokinetics: T_{1/2} = 21hrs. **Common Side effects:** Sexual side effects (28%), somnolence (24%), insomnia (24%), weakness (22%), dry mouth (18%), constipation (16%), sweating (14%), dizziness (14%), tremor (11%), decreased appetite (9%). **Warnings and Precautions:** Increased suicidality, serotonin syndrome, NMS, manic switch, teratogenic effects, seizures, discontinuation, drug-drug interactions, akathisia, abnormal bleeding, hyponatremia, bone fracture. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI, pimozone, thioridazine. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk).** **Breastfeeding:** Enters breast milk, use caution. **Significant drug-drug interactions:** MANY; Moderate CYP 450 effects; Tamoxifen; Check all drug-drug interactions. **Generic available:** IR: Yes, Inexpensive; CR: No.

SERTRALINE (ZOLOFT)

DOSING INFORMATION: Week 1: Baseline weight. Consider BMP for baseline sodium in older adults. Start 25 mg qday. Week 2: Increase to 50 mg qday, if tolerated. Week 4 and beyond: Can consider further increases in 25 mg qday per week increments. **Typical target:** 50 mg qday. **Max:** 200 mg qday. **Discontinuation:** Taper slowly to minimize withdrawal symptoms.

MONITORING: Weight. Consider posttreatment BMP to rule out hyponatremia in older adults.

GENERAL INFORMATION: Mechanism of Action: Selective serotonin reuptake inhibitor. **FDA Indications:** MDD, OCD, panic disorder, PTSD, social phobia, premenstrual dysphoric disorder. **Off-Label Indications:** Other

anxiety **Pharmacokinetics:** $T_{1/2} = 26\text{hr}$. **Common Side effects:** Nausea (25%), insomnia (21%), diarrhea (20%), sexual side effects (14%), sweating (14%), dizziness (12%), fatigue (12%), somnolence (12%), dry mouth (7%), tremors (8%). **Warnings and Precautions:** Suicidality, manic switch, serotonin symptoms or NMS, abnormal bleeding, hyponatremia, discontinuation syndrome. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI or pimozone. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Safest, Use caution. **Significant drug-drug interactions:** Minimal; Check all drug-drug interactions **Generic available:** Yes, Moderate price

TRAZODONE (DESYREL [IR], OLEPTRO [ER]): IR—IMMEDIATE RELEASE, ER— SUSTAINED RELEASE

DOSING INFORMATION: Initiation for Depression: Trazodone IR: Week 1: Baseline blood pressure, weight. Consider BMP for baseline sodium in older adults. **Starting Dosage:** Starting dose 25-50 mg bid-tid; increase by 25-50 mg/day q3 day, if tolerated, to a **typical target dosage** of 150-300 mg/day. **Max Dosage IR:** 400 mg/day. **Oleptro (ER):** Week 1: Baseline blood pressure, weight. Consider BMP for baseline sodium in older adults. Starting dose 150 mg qhs; may increase by 75 mg qhs every 3 days, if tolerated to a **typical target dosage** of 150-300 mg qhs. **Max dosage Oleptro:** 375 mg qhs. **Initiation for insomnia (off-label):** Start 25-50 mg qhs; increase in 25-50 mg qhs increments, if tolerated; typical dose 50-200 mg qhs. **Discontinuation:** Taper slowly to minimize withdrawal symptoms.

MONITORING: Weight; Consider posttreatment BMP to rule out hyponatremia in older adults. Monitor for orthostatic hypotension in elderly and other vulnerable populations.

GENERAL INFORMATION: Mechanism of Action: Serotonin reuptake inhibitor. **FDA Indications:** Depression. **Off-label indications:** Insomnia, depression augmentation. **Pharmacokinetics:** $T_{1/2} = 35\text{ hrs}$. **Common Side effects:** somnolence/sedation (46%), dizziness (25%), constipation (25%), vision blurred (5%), sexual side effects (5%). **Warnings and Precautions:** Increased suicidality, serotonin syndrome, NMS, manic switch, QTc prolongation, use in patients with heart disease (e.g., recent MI), orthostatic hypotension and syncope, abnormal bleeding, Use of MAOI or within 14 days of stopping a MAOI, hyponatremia, withdrawal syndrome, priapism. **Contraindications:** Known hypersensitivity reaction to the product. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/Use Caution. **Significant drug-drug interactions:** Check all drug-drug interactions. **Generic available:** IR – Yes

VENLAFAXINE (EFFEXOR): IR—IMMEDIATE RELEASE, ER/ XR—SUSTAINED RELEASE

DOSING INFORMATION: Effexor XR: Week 1: Baseline blood pressure, weight. Consider BMP for baseline sodium in older adults. Start 75 mg qday (start 37.5mg for panic disorder). Week 2: Increase to 150 mg qday. Week 4 and Beyond: Can consider further increases in 75 mg increments every 2 weeks as needed. **Typical target dosage:** 150 mg qday (social phobia 75 mg qday; neuropathic pain: minimum of 225 mg qday). **Max dosage:** 300 mg qday. **Effexor IR:** Week 1: Baseline blood pressure, weight. Consider BMP for baseline sodium in older adults. Start 37.5 mg BID; Can start 37.5 qday with panic disorder. Week 2: Increase to 75 mg BID. Week 3 and Beyond: Can consider further increases in 75 mg qday increments every 7 days as needed. **Typical target dosage:** 75mg BID (neuropathic pain 225 mg qday minimum effective dose). **Max:** 375 mg qday. **Discontinuation:** *Often problematic.* Taper slowly to minimize withdrawal symptoms.

MONITORING: Blood pressure, weight. Consider posttreatment BMP to rule out hyponatremia in older adults **GENERAL INFORMATION: Mechanism of Action:** Serotonin/Norepinephrine Reuptake Inhibitor (SNRI). **FDA Indications:** GAD, MDD, Panic Disorder, Social Anxiety Disorder. **Off-Label Indications:** ADHD, neuropathic pain, other anxiety. **Pharmacokinetics:** $T_{1/2} = 5\text{hrs}$. **Common Side effects:** Nausea (31%), dizziness (20%), somnolence (17%), insomnia (17%), sexual side effects (16%), sweating (14%), dry mouth (12%), nervousness (10%), anorexia (8%), abnormal dreams (7%), tremor (5%), blurry vision (5%), hypertension (5% at 150 mg qday, 13% at 300 mg qday). **Warnings and Precautions:** Increased suicidality, serotonin syndrome, NMS, manic switch, sustained hypertension, significant withdrawal syndrome, mydriasis/ narrow angle glaucoma, abnormal bleeding, serum cholesterol elevation. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI. **Black Box Warning:** Increased SI in patients < 25 y/o. **Pregnancy:** Category C. **Breastfeeding:** Use caution, safety unknown. **Significant drug-drug interactions:** Low protein binding, limited drug-drug interactions; Check all drug-drug interactions **Generic available:** Yes, IR/ER, Medium cost.

ANXIOLYTICS & HYPNOTICS

ALPRAZOLAM (XANAX)

DOSING INFORMATION: **Anxiety Disorders:** *Week 1:* Consider CBC and LFTs (see *MONITORING*); Start 0.25 to 0.5 mg tid (lower doses typically used in older adults); *Of note:* Scheduled dosing is typically more effective than PRN dosing for control of anxiety symptoms. *Week 2 and beyond:* Assess for side effects, can increase as needed. **Typical target:** 0.5 to 1 mg tid. **Max dosage:** 4 mg/day. **Panic Disorder:** Consider CBC and LFTs (see *MONITORING*); *Week 1:* Start 0.5 mg tid. *Of note:* Scheduled dosing is typically more effective than PRN dosing for control of anxiety symptoms; *Week 2 and beyond:* Assess for side effects, can increase as needed in 1mg /day increments every 3-4 days. **Typical target:** 4-6 mg/day. **Max:** 9 mg/day. **Discontinuation:** Uniquely problematic withdrawal syndrome; Recommended taper of no more than 0.5 mg every 3 days; Doses above 4 mg/day may need slower taper of 10% per month. *Of note:* Alprazolam concentrations may be reduced by up to 50% in smokers compared to non-smokers.

MONITORING: Consider UTOX if abuse/diversion is a concern. *Per FDA:* "periodic" blood counts and liver-function tests are recommended for patients on long-term therapy.

GENERAL INFORMATION: Mechanism of action: enhances activity of GABA (benzodiazepine). **FDA Indications:** Panic Disorder; Anxiety disorders; Short-term use for anxiety symptoms. **Off-label indications:** Insomnia.

Pharmacokinetics: T_{1/2} = 11 hrs; Onset: Rapid. **Common Side effects (dose dependence and listed for panic disorder):** Drowsiness/sedation (77%), impaired coordination (40%), dysarthria (23%). **Warning/Precautions:** Cognitive/motor impairment (especially in elderly), suicidal behavior/ideation, worsening of depression, mania, uricosuric effect, risk of fetal harm, withdrawal symptoms including seizures, respiratory depression, sleep apnea/COPD, physical and psychological dependence, abuse potential, use in the elderly, paradoxical reaction.

Contraindications: Known hypersensitivity reaction to the product. Acute narrow angle glaucoma and in patients taking ketoconazole or itraconazole. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk).** **Breastfeeding:** Enters breast milk /Not recommended. **Significant drug-drug interactions:** Caution with CYP 3A inhibitors. Check all drug-drug interactions. **Generic available:** Yes, inexpensive

BUSPIRONE (BUSPAR)

DOSING INFORMATION: *Week 1:* Baseline weight. Consider BMP for baseline sodium in older adults. Start 7.5 mg BID. *Week 2:* Assess for side effects, increase to 15 mg bid; Consider further increases as needed. **Typical target dosage:** 15 mg bid. **Max dosage:** 30 mg bid. *Of note:* Time frame for improvement similar to SSRIs and other antidepressants.

MONITORING: Weight. Consider posttreatment BMP to rule out hyponatremia in older adults **GENERAL INFORMATION: Mechanism of Action:** Unknown; Affinity for serotonin and dopamine receptors; Not related to benzodiazepines. *Of note:* BuSpar will not mitigate benzo withdrawal. **FDA Indications:** Anxiety. **Off-label indications:** Depression augmentation, Nicotine dependence. *Of note:* BuSpar may be helpful for reversing SSRI/SNRI induced sexual dysfunction. **Pharmacokinetics:** T_{1/2} 2-3 hrs. **Common Side effects:** dizziness (12%), nausea (8%), headache (6%), nervousness (5%). **Warnings/Precautions:** Use of MAOI or within 14 days of stopping a MAOI, restlessness syndrome. **Contraindications:** Known hypersensitivity reaction to the product. **Pregnancy:** Category B. **Breastfeeding:** Unknown/Not recommended. **Significant drug-drug interactions:** MAO Inhibitors; Check all drug-drug interactions **Generic available:** Yes.

CLONAZEPAM (KLONOPIN)

DOSING INFORMATION: *Week 1:* Consider CBC and LFTs (see *MONITORING*); Start 0.25 mg BID; *Of note:* Scheduled dosing is typically more effective than PRN dosing for control of anxiety symptoms. *Week 2:* Assess for side effects, can increase as needed to 0.5 mg BID (lower doses typically used in older adults); Can give more of dose at QHS to target insomnia, or if causing excessive daytime sedation. *Week 3 and beyond:* Can consider further increases as needed however most individuals experience less efficacy with more side effects at higher dosing. **Typical target:** 0.5 mg bid. **Max:** 4 mg/day. **Rapid Discontinuation:** 0.125 mg BID every 3 days. **Extended Discontinuation** (e.g., after months/years of use): 10% per month.

MONITORING: Consider UTOX if abuse/diversion is a concern. Per FDA: “periodic” blood counts and liver-function tests are recommended for patients on long-term therapy.

GENERAL INFORMATION: Mechanism of action: enhances activity of GABA (benzodiazepine). **FDA Indications:** Panic disorder. **Off-label indications:** GAD, Social phobia. **Pharmacokinetics:** T_{1/2} 19-50 hrs; Onset: intermediate (1-4 hrs). **Common Side effects:** Somnolence (37%), fatigue (9%), depression (8%), upper respiratory tract infection (8%), ataxia (6%), abnormal coordination (5%), memory disturbance (5%). **Warning/Precautions:** Cognitive/motor impairment (especially in elderly), suicidal behavior/ideation, worsening of depression, risk of fetal harm, withdrawal symptoms, respiratory depression, sleep apnea/COPD, worsening of seizures, physical and psychological dependence, abuse potential, use in the elderly, increased salivation, renal impairment, paradoxical reaction. **Contraindications:** Known hypersensitivity reaction to the product. Patients with clinical or biochemical evidence of significant liver disease, narrow angle glaucoma. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk).** **Breastfeeding:** Enters breast milk and causes lethargy etc./not recommended. **Significant drug-drug interactions:** Check all drug-drug interactions. **Generic available:** Yes, inexpensive.

HYDROXYZINE (VISTARIL, ATARAX)

DOSING INFORMATION: Week 1: Start 25 mg q6 hr. Week 2: Assess for side effects/efficacy and consider increase to 50 mg q6hr. Week 3: Assess for side effects/efficacy and can consider further titration to 100 mg q6 hr. Of note: Can start at 50 mg q 6hrs and titrate up to 100 mg q 6hr more quickly, if needed. **Typical target:** 50-100 mg q6hs. **Max dosage:** 400 mg/day.

GENERAL INFORMATION: Mechanism of action: Antihistamine (H₁-receptor). **FDA Indications:** Anxiety. **Non-FDA Indications:** Insomnia. **Pharmacokinetics:** T_{1/2} 3-7hr. **Common Side effects:** Sedation; dry mouth. **Warning/Precautions:** Use in elderly patients, asthma, high environmental temperatures. **Contraindications:** **Use in early pregnancy is contraindicated by the manufacturer.** Known hypersensitivity reaction to the product. **Pregnancy:** Category C (fetal abnormalities in animal studies). Use in early pregnancy is contraindicated by the manufacturer. **Breastfeeding:** Excretion in breast milk unknown/not recommended. **Significant drug-drug interactions:** Check all drug-drug interactions. **Generic available:** Yes, medium.

LORAZEPAM (ATIVAN)

DOSING INFORMATION: Week 1: Consider CBC and LFTs (see *MONITORING*); Start 0.5 mg bid (lower doses typically used in older adults); Of note: Scheduled dosing is typically more effective than PRN dosing for control of anxiety symptoms. Week 2: Assess for side effects, can increase as needed to 1 mg BID. Can give more of dose at QHS to target insomnia or if causing excessive daytime sedation. Week 3 and beyond: Can consider further increases as needed. **Typical target dosage:** 1-3 mg BID. **Max dosage:** 10 mg/day. **Rapid discontinuation:** 10% every 3 days. **Extended Discontinuation** (e.g., after months/years of use): 10% per month.

MONITORING: Consider UTOX if abuse/diversion is a concern. Per FDA: “periodic” blood counts and liver-function tests are recommended for patients on long-term therapy.

GENERAL INFORMATION: Mechanism of action: enhances activity of GABA (benzodiazepine). **FDA Indications:** Anxiety disorders; Short-term use for anxiety symptoms or anxiety associated with depressive symptoms. **Off-label indications:** Insomnia (1-4 mg QHS). **Pharmacokinetics:** T_{1/2} = 12 hrs; Onset: intermediate (2 hrs); Of note: no active metabolites, so safer in liver disease. **Common Side effects:** (15.9%), dizziness (6.9%), weakness (4.2%), unsteadiness (3.4%). **Warning/Precautions:** Cognitive/motor impairment (especially in elderly), suicidal behavior/ideation, worsening of depression, risk of fetal harm, withdrawal symptoms, respiratory depression, sleep apnea/COPD, physical and psychological dependence, abuse potential, use in the elderly, paradoxical reaction. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk).** **Contraindications:** Known hypersensitivity reaction to the product. Acute narrow-angle glaucoma. **Breastfeeding:** Enters breast milk and causes lethargy etc./not recommended. **Significant drug-drug interactions:** Check all drug-drug interactions. **Generic available:** Yes, inexpensive.

TEMAZEPAM (RESTORIL)

DOSING INFORMATION: Week 1: Start 7.5-15 mg qhs. Week 2: Assess for side effects, can increase as needed

to 15-30 mg qhs. **Typical target:** 15-30 mg qhs. **Max dosage:** 30 mg qhs (15 mg typically used in older adults). **Discontinuation:** No taper needed, if less than 10 days use; Recommend taper 10% every 3 days with long-term use.

MONITORING: Consider UTOX if abuse/diversion is a concern.

GENERAL INFORMATION: Mechanism of action: enhances activity of GABA (benzodiazepine hypnotic). **FDA**

Indications: Short-term use for insomnia (7-10 days). **Pharmacokinetics:** $T_{1/2}$ = 8 hrs; Onset: rapid (0.5 hr).

Common Side effects: Sedation. **Warnings/Precautions:** Severe anaphylactic and anaphylactoid reactions (rare), use in the elderly, "sleep-driving" and other complex behaviors, disinhibition, bizarre behavior, depersonalization, hallucinations, suicidal behavior/ideation, worsening of depression, use in patients with impaired renal or hepatic function or chronic pulmonary insufficiency, physical and psychological dependence, cognitive/motor impairment (especially in elderly), withdrawal syndrome, abuse potential. **Contraindications:** Known hypersensitivity reaction to the product. Women who are or may become pregnant. **Pregnancy:** **Category X/Established risk of congenital malformations (need to inform women of childbearing age of this risk).** **Breastfeeding:** Enters breast milk/of concern. **Significant drug-drug interactions:** Check all drug-drug interactions **Generic available:** Yes, inexpensive

ZOLPIDEM (AMBIEN, AMBIEN CR): CR—SUSTAINED RELEASE

DOSING INFORMATION: Week 1: Ambien 5-10 mg qhs (Ambien CR 6.25-12.5 mg qhs); Start 5 mg (Ambien CR 6.25 mg qhs) for elderly/debilitated patients/hepatically impaired. Week 2: Assess for side effects. **Typical target:** 10 mg qhs (Ambien CR 12.5mg QHS). **Max:** 10 mg qhs (Ambien CR 12.5mg QHS). Of note: Should not be taken with or immediately after a meal.

GENERAL INFORMATION: Mechanism of action: Non-benzodiazepines hypnotic that acts at the benzodiazepine receptor. **FDA Indications:** Short-term treatment of insomnia. **Pharmacokinetics:** $T_{1/2}$ 2.5-3 hrs. **Common Side effects:** Drowsiness (8%), dizziness (5%). **Warnings/Precautions:** Severe anaphylactic/anaphylactoid reaction, abnormal thinking, behavioral changes and complex behaviors (e.g., "sleep driving" and hallucinations), worsening of depression or, suicidal thinking, withdrawal effects, CNS depressant effects, use in the elderly/debilitated, use in patients with hepatic impairment, mild to moderate COPD, impaired drug metabolism or hemodynamic responses, or mild to moderate sleep apnea. **Contraindications:** Known hypersensitivity reaction to the product. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/use caution. **Significant drug-drug interactions:** Check all drug-drug interactions **Generic available:** Yes, medium.

MEDICATIONS FOR ADHD

ATOMOXETINE (STRATTERA)

DOSING INFORMATION: Week 1: Evaluate cardiovascular risk (e.g., presence of structural cardiac abnormalities or other serious heart problems); Baseline HR, BP and consider EKG; Start 40 mg qday. Week 2: Assess for side effects; Increase 80 mg Qday (either single dose or 40 mg BID). Week 4-6: Assess for side effects; can consider further increase to 100 mg/day if still symptomatic. **Typical target:** 80 mg qday. **Usual Max dosage:** 100 mg qAM.

MONITORING: BP and HR at baseline, 1 month, then every 6 to 12 months; hepatic function tests if signs of liver dysfunction.

GENERAL INFORMATION: Mechanism of action: selective norepinephrine reuptake inhibitor. **FDA Indication:** ADHD. **Pharmacokinetics:** $T_{1/2} = 5$ hrs. **Common Side effects:** Dry mouth (21%), nausea (21%), insomnia (15%), decreased appetite (11%), fatigue (9%), Constipation (9%), erectile dysfunction (9%), urinary hesitation/retention (7%) dysmenorrhea (6%), hot flush (8%). **Warnings/Precautions:** Severe liver injury (rare), serious cardiovascular events, increased blood pressure and heart rate, new psychotic or manic symptoms – screen for psychosis and bipolar disorder, aggressive behavior/hostility, allergic events, obstructive urinary outflow, priapism; dosage adjustment in patients receiving strong CYP2D6 inhibitors or patients known to be CYP2D6 poor metabolizers. **Contraindications:** Known hypersensitivity reaction to the product. Use of MAOI or within 14 days of stopping a MAOI, narrow angle glaucoma, pheochromocytoma. **Black Box Warning:** Increased risk of suicidal ideation in children or adolescents. **Pregnancy:** Category C. **Breastfeeding:** Excretion in breast milk unknown/use caution. **Significant drug-drug interactions:** Fluoxetine, paroxetine (see Warnings/Precautions above); Check all drug-drug interactions. **Generic available:** No, Expensive.

D-AMPHETAMINE AND L-AMPHETAMINE SALTS (ADDERALL): IR—IMMEDIATE RELEASE, ER/ XR—SUSTAINED RELEASE

DOSING INFORMATION: IR: Week 1: Evaluate cardiovascular risk (e.g., presence of structural cardiac abnormalities or other serious heart problems); Baseline HR, BP and consider EKG; Start 5 mg qAM and 5 mg qPM (use intervals of 4-6 hours between doses—can take earlier in the afternoon if insomnia results). Week 2: Assess for side effects; Increase to 10 mg qAM and 5 mg qPM. Week 3 and beyond: Assess for side effects; can consider further increases is 5 mg qday per week increments until treatment of symptoms or max dose reached.

ER/XR: Week 1: Evaluate cardiovascular risk (e.g., presence of structural cardiac abnormalities or other serious heart problems); Baseline HR, BP and consider EKG. Start 10 mg QAM. Week 2: Assess for side effects; Increase to 20 mg qAM. Week 3 and beyond: Assess for side effects; can consider further increase in 10 mg increments qAM per week until treatment of symptoms or max dose reached. **Typical target:** Lowest effective individualized dose. **Usual Max dosage:** 40 mg/day.

MONITORING: BP and HR at baseline, 1 month, then every 6 to 12 months; Signs of aggressive behavior or hostility; Consider UTOX if abuse/diversion is a concern.

GENERAL INFORMATION: Mechanism of action: Stimulant. **FDA Indication: IR:** ADHD in children, narcolepsy. **ER/XR:** ADHD in children and adults. **Pharmacokinetics:** $T_{1/2} = 10-14$ hrs. **Common Side effects (XR):** Dry mouth (35%), loss of appetite (33%), insomnia (27%), headache (26%), weight loss (11%), nausea (8%), anxiety, agitation (8%), dizziness, tachycardia (6%), diarrhea (6%), urinary tract infections (5%). **Warnings/Precautions:** Sudden death, stroke, and myocardial infarction have been reported in patients taking stimulants. Generally avoid in patients with known structural cardiac abnormalities, cardiomyopathy, serious heart rhythm abnormalities, coronary artery disease, or other serious heart problems; Increase in blood pressure; Development of psychotic or manic symptoms in patient's without prior history, or worsening of symptoms in patient with pre-existing psychiatric illness; Aggressive behavior; Seizures; Visual disturbance; Tics. **Contraindications:** Known hypersensitivity reaction to the product. Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity or idiosyncrasy to the sympathomimetic amines, glaucoma, agitated states, history of drug abuse, during or within 14 days following the administration of a MAOI. **Black Box Warnings:** High potential for abuse/dependence; Misuse may cause sudden death and serious cardiovascular adverse events. **Pregnancy:** Category C.

Breastfeeding: Enters breast milk/contraindicated. **Significant drug-drug interactions:** MAO-I; Check all drug-drug interactions. **Generic available:** IR: Yes, moderate; XR: Yes, Expensive

METHYLPHENIDATE (IMMEDIATE RELEASE (IR): RITALIN; METHYLPHENIDATE SUSTAINED RELEASE (SR): METADATE ER, METHYLIN ER, RITALIN SR; METADATE CD, RITALIN LA, CONCERTA, DAYTRANA-PATCH)

DOSING INFORMATION: IR: Week 1: Evaluate cardiovascular risk (e.g., presence of structural cardiac abnormalities or other serious heart problems); Baseline HR, BP and consider EKG; Start 5 mg qAM and 5 mg qPM (preferably before meals; use intervals of 4-6 hours between doses; can take earlier in the afternoon if insomnia results). Week 2: Assess for side effects; Increase to 10 mg qAM and 5 mg qPM. Week 3 and beyond: Assess for side effects; can consider further increases of 5 mg/day per week increments until treatment of symptoms or max dose reached. SR: Week 1: Evaluate cardiovascular risk (e.g., presence of structural cardiac abnormalities or other serious heart problems); Baseline HR, BP and consider EKG; Start 10 mg qAM (preferably before meals). Week 2: Assess for side effects; Increase to 20 mg qAM. Week 3 and beyond: Assess for side effects; can consider further increase in 10 mg increments qday per week until treatment of symptoms or max dose reached. Concerta: Week 1: Evaluate cardiovascular risk (e.g., presence of structural cardiac abnormalities or other serious heart problems); Baseline HR, BP and consider EKG; Start 18 mg qAM. Week 2: Assess for side effects; Increase to 36 mg qAM as needed; Week 3 and beyond: Assess for side effects; can consider further increases is 18 mg qday per week increments until treatment of symptoms or max dose reached. Daytrana: Patch; Special dosing (see FDA guidelines). **Typical target:** Lowest effective individualized dose. **Usual Max dosage:** 60 mg/day (Concerta 72 mg/day).

MONITORING: BP and HR at baseline, 1 month, then every 6 to 12 months; Signs of aggressive behavior or hostility; Consider UTOX if abuse/diversion is a concern. Per FDA: "Periodic CBC, differential, and platelet counts are advised during prolonged therapy."

GENERAL INFORMATION: Mechanism of action: Stimulant. **FDA Indication:** ADHD; Narcolepsy

Pharmacokinetics: IR: $T_{1/2} = 2$ hrs; SR: $T_{1/2}$ 4-7hrs. **Common Side effects (Concerta):** Decreased appetite (25%), headache (22%), dry mouth (14%), nausea (13%), insomnia (12%), anxiety (8%), weight decreased (7%), irritability (6%), and hyperhidrosis (5%). **Warnings/Precautions:** Sudden death, stroke, and myocardial infarction have been reported in patients taking stimulants. Generally avoid in patients with known structural cardiac abnormalities, cardiomyopathy, serious heart rhythm abnormalities, coronary artery disease, or other serious heart problems; Increase in blood pressure; Development of psychotic or manic symptoms in patient's without prior history, or worsening of symptoms in patient with pre-existing psychiatric illness; Aggressive behavior; Seizures; Visual disturbance; Tics. GI obstruction with pre-existing GI narrowing. **Contraindications:** Known hypersensitivity reaction to the product. Marked anxiety, tension, and agitation, glaucoma tics or a family history or diagnosis of Tourette's syndrome, during or within 14 days following the administration of a MAOI.

Black Box Warnings: Drug dependence. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/use caution **Significant drug-drug interactions:** MAO-I; Coumadin; Check all drug-drug interactions. **Generic available:** IR: Yes, moderate; SR: Yes, Moderate to expensive

MISCELLANEOUS MEDICATIONS/SUPPLEMENTS

NALTREXONE (REVIA)

DOSING INFORMATION: The typical starting dosage and target dosage is 50 mg qday. At least one large randomized controlled study (the COMBINE study) used 100 mg qday, which may be more effective.

MONITORING: Liver function studies should be done at the beginning of treatment, and followed, particularly for patients receiving high doses of naltrexone or in whom results were elevated before medication was initiated.

GENERAL INFORMATION: Mechanism of action: opiate antagonist. **FDA indications:** Opiate and alcohol dependence. **Off-label indication:** self-injurious behavior. Of note: Naltrexone will cause opioid withdrawal; thus, it should not be used until the patient is opioid free for 7 to 10 days. Self-reporting of abstinence from opioids in opioid addicts should be verified by analysis of the patient's urine for absence of opioids. Patients treated with naltrexone should carry a card, for emergency medical care, in case they require treatment with an opioid analgesic. If there is any question of occult opioid dependence, perform a naloxone challenge test and do not initiate naltrexone therapy until the challenge test is negative. $T_{1/2} = 4\text{hr}$. **Common Side effects:** nausea, vomiting, headache, muscle cramps, dizziness or syncope, somnolence or sedation, anorexia, decreased appetite or other appetite disorders. **Warnings and Precautions:** Hepatotoxicity, eosinophilic pneumonia, hypersensitivity reactions, unintended precipitation of opioid withdrawal, opioid overdose at the end of a dosing interval, after missing a dose and following an attempt to overcome opioid blockade, depression and suicidality.

Contraindications: Known hypersensitivity reaction to the product. Patients with acute hepatitis or liver failure, patients receiving opioid analgesics, patients with current physiologic opioid dependence, patients in acute opioid withdrawal. Any individual who has failed the naloxone challenge test or has a positive urine screen for opioids.

Black Box Warning: Naltrexone can cause hepatocellular injury when given in excessive doses and is contraindicated in acute hepatitis or liver failure. Use of naltrexone should be discontinued in the event of symptoms or signs of acute hepatitis. **Patient education:** Patients should be warned of the risk of hepatic injury and advised to stop the use of naltrexone and seek medical attention if they experience symptoms of acute hepatitis. Check all drug-drug interactions. Pregnancy: C. Breastfeeding: safety unknown. **Significant drug-drug interactions:** Opiates. Generic Available: Yes, inexpensive.

OMEGA 3 FISH OILS

DOSING INFORMATION: The typical therapeutic dosage of EPA and DHA (usually found together in a supplement) is approximately 1500 mg/day in divided dosages with meals. The two psychoactive components of fish oil are EPA and DHA. They are naturally available in fish oil in a ratio of approximately 2:1.

MONITORING: None needed.

GENERAL INFORMATION: Omega 3 Fatty acids from fish oils have an increasing evidence for efficacy as an adjunctive treatment for unipolar depression. They are not considered a first-line treatment at this time. The best products are both protected from oxidation by the addition of Vit E and purified (filtered or distilled) to eliminate contaminants (pesticides and heavy metals). Premium brands include Nordic Naturals and Carlson. Therapeutic dosages can be purchased for as little as \$20 per month and with other brands (e.g., Costco brands), significantly less (e.g., ~\$5/mo).

PRAZOSIN (MINIPRESS)

DOSING INFORMATION: *Week 1:* Prazosin 1mg qhs increase to 2 mg qhs after 3-4 days. *Week 2:* Assess for side effects; Continue titration in 1 mg qhs increments every 3-4 days until symptom remission, limiting side effects or max dose reached. **Typical target:** 3-5 mg qhs. **Usual Max:** 10 mg qhs (in severe PTSD).

MONITORING: Blood pressure.

GENERAL INFORMATION: **Mechanism of action:** Antihypertensive (alpha-1 blocker). **Non-FDA Indication:** PTSD-related nightmares. **Pharmacokinetics:** $T_{1/2}$ = 2-3 hrs. **Common Side effects:** Dizziness (10%), headache (8%), lack of energy (7%), weakness (6%), palpitations (5%), nausea (5%). **Warnings/Precautions:** Orthostatic hypotension, syncope, cataract surgery. **Contraindications:** Known hypersensitivity reaction to the product. **Pregnancy:** Category C. **Breastfeeding:** Excreted in breast milk/use caution. **Significant drug-drug interactions:** Check all drug-drug interactions; Taking with trazodone or Viagra may increase risk priapism. **Generic available:** Yes, inexpensive.

MOOD STABILIZERS

CARBAMAZEPINE EXTENDED RELEASE (TEGRETOL XR; EQUETRO)

DOSING INFORMATION: Initiation: Check baseline labs (urine pregnancy, platelets, reticulocytes, serum iron, CMP—see below for guidelines regarding Asian patients). **Week 1:** Start 200 mg BID. **Week 2-8:** Check trough carbamazepine plasma level before the morning dose. If level is sub therapeutic, increase dosage by 200 mg/day. This process is repeated weekly over 8 weeks due to autoinduction of metabolism. **Target plasma level:** Therapeutic levels: 4-12 mcg/mL (600-1200 mg/day; **usual max dosage:** 1600 mg/day). **Toxic concentration:** >15 mcg/mL.

ONGOING MONITORING: Baseline labs: urine pregnancy, platelets, reticulocytes, serum iron, CMP. Monitoring of blood levels is recommended with the usual adult therapeutic drug levels between 4 and 12 mcg/mL. This medication induces autoinduction of metabolism, which is usually complete 3-5 weeks after initiation of a fixed carbamazepine regimen. Monitoring frequency (blood level & CBC including platelets): Qweekly X 8 weeks, Q2months X 2, and then q6-12months.

GENERAL INFORMATION: Mechanism of action: Antiepileptic drug with mood stabilizer efficacy chemically related to tricyclic antidepressants. **FDA Indications:** Bipolar I, acute manic and mixed episodes.

Pharmacokinetics: T $\frac{1}{2}$ variable due to autoinduction; Initial: 35-40 hours Steady state: 12-17 hours. **Side effects: Common:** Dizziness (44%), somnolence (32%), nausea (29%), vomiting (18%), ataxia (15%), pruritis (8%), dry mouth (8%), blurred vision (6%), speech disorder (6%). **Warnings and Precautions:** Increased SI; Caution in patients with liver disease and hematologic dysfunction. **Contraindications:** Hypersensitivity to carbamazepine, tricyclic antidepressants, or any component of the formulation; bone marrow depression; with or within 14 days of MAO inhibitor use; concurrent use of nefazodone. **Black Box Warnings:** (1) Serious and sometimes fatal dermatologic reactions, including toxic epidermal necrolysis (TEN) and Stevens-Johnson syndrome (SJS). Estimated occurrence: 1 to 6 per 10,000 new users in countries w/ mainly Caucasian populations, but the risk in some Asian countries is estimated 10X higher and are associated with the presence of HLA-B*1502. Asian patients and other high-risk patients should be screened for the presence of HLA-B*1502 prior to starting Tegretol. (2) Aplastic anemia and agranulocytosis. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk) and should be avoided in pregnancy.** **Breastfeeding:** The manufacturer does not recommend use while breast-feeding. However, AAP rates this medication "compatible" in breast-feeding. **Significant drug-drug interactions:** Check all drug-drug interactions before prescribing as Tegretol has multiple drug interactions including but not limited to decreasing warfarin and hormone contraceptives. **Generic Available:** Yes.

DIVALPROEX SODIUM (DEPAKOTE ER, STAVZOR (IR))

DOSING INFORMATION: Initiation: Check baseline labs (urine pregnancy, platelet counts, coagulation tests, and liver function tests). **Week 1:** Start Depakote ER (extended-release) 750 mg QHS. **Week 2:** Check trough Depakote ER plasma level before, but as close to the dosing time as possible. If level is sub therapeutic, add 250-500 mg to QHS dose. Repeat weekly as need to reach therapeutic dosage. **Target plasma level:** 85 to 125 mcg/mL. **Usual max dosage:** 60 mg/kg/day. **Formulation:** Depakote DR is a less preferable formulation due to increased side effect profile. If used, Depakote DR typically requires lower doses divided BID or TID and a trough plasma level of 50 to 125 mcg/mL.

ONGOING MONITORING: Platelet counts, coagulation tests, and liver function tests are recommended before initiating therapy and at least q6 months.

GENERAL INFORMATION: Mechanism of action: Antiepileptic drug with mood stabilizer efficacy. **FDA Indications:** Bipolar I disorder, mania or mixed. **Off-Label Indications:** Bipolar I disorder, rapid cycling.

Pharmacokinetics: T $\frac{1}{2}$ = 9-16 hrs. **Side effects: Common:** Headache (31%), somnolence (27%), fatigue (27%), tremor (25%), dizziness (25%), dyspepsia (23%), nausea (19%), diplopia (16%), vomiting (13%), diarrhea (12%), anorexia (12%), abdominal pain (10%), ataxia (8%), nystagmus (8%), weight gain (8%), alopecia (6%), cognitive impairment (6%), amnesia (5%). **Warnings and Precautions:** Hepatotoxicity, teratogenic effects, pancreatitis, suicidal behavior or ideation, thrombocytopenia, hyperammonemia and hyperammonemic encephalopathy, hypothermia, somnolence in the elderly, multi-organ hypersensitivity, Stevens-Johnson syndrome (1:5000).

Contraindications: Known hypersensitivity reaction to the product. Urea cycle disorders, hepatic disease or significant dysfunction. **Black Box Warnings:** (1) Hepatotoxicity, (2) pancreatitis and (3) teratogenicity. **Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk) and should be avoided in pregnancy.** May cause teratogenic effects such as neural tube defects (e.g., spina bifida) and lower cognitive test scores in children with fetal valproate exposure. **Breastfeeding:** Probably safe. **Significant drug-drug interactions:** Check all drug-drug interactions before prescribing because they are common with this medication. Example drugs that increase Depakote level (erythromycin, fluoxetine, aspirin, ibuprofen); Example drugs that decrease Depakote level (rifampin, carbamazepine). **Generic Available:** ER, DR; Moderately expensive.

LAMOTRIGINE (LAMICTAL)

DOSING INFORMATION: Initiation: Week 1 and 2: 25 mg Qday. Week 3 and 4: 50 mg Qday. Week 5: 100 mg Qday. Week 6: 200 mg Qday. Dosage will need to be adjusted for patients taking carbamazepine, phenytoin, phenobarbital, primidone, or valproate (see FDA guidelines). Estrogen containing oral contraceptives increase metabolism of Lamictal such that target dose may need to be increased. Starter packs are available. **Typical Target Dosage:** 200 mg Qday; No evidence of increased mood stabilization benefit at higher doses.

ONGOING MONITORING: Typically do not measure drug levels. **Restarting therapy after discontinuation:** If lamotrigine has been withheld for 3 days, restart according to initial dosing recommendations. **Non-urgent discontinuation:** Decrease by 50% per week.

GENERAL INFORMATION: Mechanism of action: Antiepileptic drug with mood stabilizer efficacy. **FDA Indications:** Bipolar Disorder, maintenance. **Off-Label Indications:** Bipolar, depression. **Pharmacokinetics:** $T_{1/2}$ = 25-37hrs. **Side effects: Common:** Dizziness (31%), headache (29%), double vision (24%), nausea (18%), somnolence (14%), blurred vision (11%), unsteadiness/ataxia (10%). **Warnings and Precautions:** Suicidal ideation, blood dyscrasias, multi-organ failure, aseptic meningitis, withdrawal seizures. **Contraindications:** Known hypersensitivity reaction to the product. **Black Box Warning:** (1) For serious, life-threatening rashes requiring hospitalization and discontinuation of treatment (Stevens Johnson syndrome @ approx. 1: 1000 to 2000). The risk of rash may also be increased by co-administration of lamotrigine with Depakote (valproic acid) exceeding the recommended initial dose of lamotrigine, or exceeding the recommended dose escalation for lamotrigine. Nearly all cases of life-threatening rashes associated with lamotrigine have occurred within 2 to 8 weeks of treatment initiation. Lamotrigine should ordinarily be discontinued at the first sign of rash, unless the rash is clearly not drug related. **Pregnancy:** Category C; North American Antiepileptic Drug Pregnancy Registry (NAAED) suggest an increased incidence of cleft lip and/or cleft palate following first trimester exposure. **Breastfeeding:** Enters breast milk/not recommended. American Academy of Pediatrics Committee on Drugs considers the use of lamotrigine "of concern" in breastfeeding. **Significant drug-drug interactions:** Check all drug-drug interactions before prescribing. Notable interactions include: estrogen containing oral contraceptive increase metabolism, carbamazepine, phenytoin, phenobarbital, primidone, or valproate. **Generic Available:** Yes, Moderately expensive

LITHIUM (LITHIUM CARBONATE), LITHIUM-CONTROLLED RELEASE (LITHIUM ER, LITHOBID)

DOSING INFORMATION: Initiation: Check baseline labs (urine pregnancy, basic metabolic panel (baseline BUN and Cr), CBC (for baseline WBC) TSH, EKG (for patients over 40 y/o). Week 1: Start Lithium 300 mg BID or 600 mg QHS (may start with 300 mg/qhs, if the patient is less acute or sensitive to side effects, to increase tolerability). Week 2 and Beyond: Check lithium level weekly and as indicated increase dose in 300 mg/day increments to target plasma level of 0.8-1.0meq/L. **Typical Target:** Plasma level 0.8-1.0meq/L and less than 1.2meq/L which usually equates with daily dose of 1200mg to 1800mg. **Dosing:** Schedule should be determined by tolerability and compliance; Typically BID or QHS. **Formulation:** There are both immediate release and sustained release formulations. Nausea is more common with IR formulations and diarrhea with ER formulations.

ONGOING MONITORING: Lithium: 5-7 days after dose change (ideally 12 hours after last dose) and Q6 months when stable. Other labs: Baseline labs as above, Repeat at Q3 months X 2 and Q6 months

GENERAL INFORMATION: Mechanism of action: Natural salt with mood stabilizer efficacy. **FDA Indications:** Bipolar disorder, mania; bipolar disorder, maintenance. **Off-Label Indications:** Bipolar disorder, depression;

depression augmentation; anti-suicide effect. **Pharmacokinetics:** $T_{1/2} = \sim 24$ hrs. **Side effects: Common:** Nausea, tremor, polyuria (related to nephrogenic diabetes insipidus) and thirst, weight gain, loose stools, cognitive impairment (sedation, including changes in memory, concentration, apathy, and decreased creativity).

Warnings and Precautions: The two most important long-term adverse effects of lithium involve the kidneys and thyroid gland. Cardiac rhythm disturbances have been described (these almost always occur in patients with preexisting cardiac disease). **Contraindications:** Known hypersensitivity reaction to the product. Significant renal impairment, significant cardiovascular disease, psoriasis, sodium depletion, dehydration, debilitation. **Black Box Warning:** (1) Toxicity can occur at levels close to therapeutic dosing: Mild symptoms occur at 1.5-2.5 meq/L (increase tremor, slurred speech, and increased lethargy), Moderate 2.5-3.5 meq/L (clonus, coarse tremors, worsening lethargy), and Severe above 3.5 meq/L which can be lethal. **Pregnancy: Pregnancy: Category D; associated w/ increased risk of teratogenesis (need to inform women of childbearing age of this risk).** Cardiac malformations, including Epstein's anomaly (background rate of this defect is 1/20,000 births compared to the 1/1000 rate among infants exposed to lithium in utero), are the primary risk of using lithium during the first trimester. **Breastfeeding:** American Academy of Pediatrics Committee on Drugs has classified lithium as "incompatible" with breastfeeding, due to documented accumulations in both maternal breast milk and infant serum. **Significant drug-drug interactions:** Check all drug-drug interactions before prescribing. Examples include thiazide diuretics, NSAIDs (except aspirin), ACE-inhibitors, tetracyclines, metronidazole, potassium-sparing diuretics, theophylline, loop diuretics, and calcium channel blockers. **Generic Available:** Yes, inexpensive.

ANTIPSYCHOTICS

ARIPIRAZOLE (ABILIFY) Antipsychotic risk profile: EPS: Mild; TD Risk: Mild; Sedation: Mild; Metabolic Effects: Mild.

DOSING INFORMATION: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, CBC (for baseline WBC), EKG (to assess QTc) and AIMS test. **Initiation for Schizophrenia:** Week 1: Start 5 mg Qday. Week 2-3: Assess for side effects and increase and increase dose to 10 mg Qday for at least 2 weeks. Week 4: Assess for side effects; if still symptomatic consider further increase to 15 mg QDay. Maximum dosage: 30 mg Qday, although there is no evidence for benefit of doses above 15 mg QDay. Typical Target: 10-15 mg Qday. **Initiation for Bipolar Manic/Mixed Episode:** Week 1: Start 7.5 mg Qday. Week 2: Assess for side effects and increase dose to 15 mg QDay. Maximum dosage: 30 mg Qday, although there is no evidence for benefit of doses above 15 mg QDay. Typical target: 15 mg Qday. **Initiation for Major Depressive Disorder, Adjunctive:** Week 1-2: Start 2 mg Qday. Continue for at least 2 weeks. Week 3: Assess for side effects; Consider further increase to 5 mg Qday, if still severely symptomatic. Typical target: 2-5 mg Qday. Usual max: 10 mg Qday.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: weight. At 8 weeks: weight. At 12 weeks: weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: weight. Annually /ongoing: waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, and AIMS test. Repeat CBC in patients with previous low WBC.

GENERAL INFORMATION: Atypical antipsychotic/partial dopamine agonist. **FDA Indications:** Schizophrenia; Bipolar mania and mixed episode (also as adjunctive to lithium and valproate); Major depressive disorder, adjunctive; Irritability associated with autism (pediatrics). **Off-Label Indications:** PTSD/OCD augmentation. **Pharmacokinetics:** T_{1/2} = 75 h. **Side effects: Common:** Akathisia (19%), insomnia (18%), constipation (11%), sedation/fatigue (8%), tremor (6%), extra-pyramidal symptoms (5%). **Warnings and Precautions:** Seizures, QTc prolongation, orthostatic hypotension, neuroleptic malignant syndrome, agranulocytosis, hyperglycemia/diabetes, tardive dyskinesia, sudden cardiac death, cerebrovascular accident and body temperature dysregulation. **Contraindications:** Known hypersensitivity reaction to the product. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. (2) Increased initial risk of suicidality when used for treatment of depression. **Pregnancy:** Category C. Developmental toxicity and teratogenic effects in animal studies. **Breastfeeding:** Enters breast milk/not recommended. **Significant drug-drug interactions:** Check all drug-drug interactions before prescribing. **Generic Available:** No.

ASENAPINE (SAPHRIS) Antipsychotic risk profile: EPS: Mild to moderate; TD Risk: Unknown; Sedation: Mild to moderate Metabolic Effects: Mild

DOSING INFORMATION: Initiation for Schizophrenia and Bipolar Mania: Week 1: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, EKG (to assess QTc) and AIMS test. Week 1: Start 5 mg BID. This is a sublingual medication and patient should not eat or drink for 10 min after administration. Can consider 10 mg BID for severe presentations. Week 2: Assess for side effects. Consider further titration to 10 mg BID dosing as needed. Typical target: 5-10 mg BID. Maximum Dose: 10 mg BID.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: Weight. Annually ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, AIMS test. Repeat CBC in patients with previous low WBC.

GENERAL INFORMATION: Atypical antipsychotic. **FDA Indications:** Acute schizophrenia; Acute bipolar mania or mixed (monotherapy or as adjunctive). **Off-Label Indications:** None. **Pharmacokinetics:** T_{1/2} = 24 hrs. **Side effects: Common:** Somnolence (13%), extrapyramidal symptoms (12%), akathisia (11%), dizziness (11%), weight gain (5%), mouth numbness (4%), dyspepsia (4%). **Warnings and Precautions:** Sudden cardiac death, cardiovascular accident, neuroleptic malignant syndrome, tardive dyskinesia, hyperglycemia/diabetes/weight gain, orthostatic hypotension, QTc prolongation, hyperprolactinemia, leukopenia /neutropenia/agranulocytosis, seizures, body temperature dysregulation.

Contraindications: Known hypersensitivity reaction to the product. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. **Pregnancy:** Category C. **Breastfeeding:** Not known if enters breast milk/not recommended. **Significant drug-drug interactions:** Paxil, Luvox. Check all drug-drug interactions. **Generic Available:** No.

HALOPERIDOL (HALDOL) Antipsychotic risk profile: EPS: High; TD Risk: High; Sedation: Mild; Metabolic Effects: Mild.

DOSING INFORMATION: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, EKG (to assess QTc) and AIMS test. **Initiation for Schizophrenia:** Week 1: Start haloperidol 1 mg BID*. Week 2: Assess for side effects and increase haloperidol to 2mg BID. Week 3 and beyond: Assess for side effects and consider further increases to 1 mg BID increments until symptom remission or max dose is reached. If QAM dosage is excessively sedating consider consolidating more of the dose to QHS. **Typical Target:** 6-10 mg. **Max Dosing:** 20mg Note: Often need to prescribe an anticholinergic medication to deal with Parkinsonian side effects (Benadryl 25 mg or Cogentin 1-2 mg PRN or scheduled).

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: weight. At 8 weeks: weight. At 12 weeks: weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: weight. Annually /ongoing: waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, and AIMS test.

GENERAL INFORMATION: Typical antipsychotic. **FDA Indications:** Schizophrenia. **Pharmacokinetics:** T_{1/2} = 18 hrs. **Side Effects: Common:** Extra-pyramidal symptoms (Parkinsonism, akathisia), orthostatic hypotension, sedation/fatigue, weight gain, dry mouth, nausea, insomnia, dizziness, anxiety, and tremor.

Warnings/Precautions: Tardive dyskinesia, QTc prolongation, neuroleptic malignant syndrome, agranulocytosis, hypoglycemia/diabetes, Hyperprolactinemia, priapism, sudden cardiac death, cerebrovascular accident.

Contraindications: Known hypersensitivity reaction to the product. Severe toxic central nervous system depression or comatose states. **Black Box Warning:** (1) Increased mortality in elderly patients with dementia related psychosis. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/not recommended; AAP "of concern". **Significant drug-drug interactions:** Check all drug-drug interactions before prescribing. **Generic Available:** Yes, inexpensive.

ILIOPERIDONE (FANAPT) Antipsychotic risk profile: EPS: Very low; TD Risk: Mild; Sedation: Unknown, likely moderate; Metabolic Effects: Moderate

DOSING INFORMATION: Initiation for Schizophrenia: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, EKG (to assess QTc) and AIMS test. Week 1: Day 1: Start 1 mg BID. Day 2: 2 mg BID. Day 3: 4 mg BID. Day 4: 6 mg BID. Titration can be slowed for orthostatic hypotensive effects. Week 2: Assess for side effects. Consider further titration to max dosing as needed. Typical target dosage: 12mg/day. Maximum Dose: 24 mg/day. Restarting therapy after discontinuation: If medication has been stopped for greater than 3 days, the initial titration schedule should be followed.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: Weight. Annually ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, AIMS test. Repeat CBC in patients with previous low WBC.

GENERAL INFORMATION: Atypical antipsychotic. **FDA Indications:** Schizophrenia. **Off-Label Indications:** None.

Pharmacokinetics: T_{1/2} = 18-33hrs. **Side effects: Common:** Dizziness (20%), fatigue/somnolence (15%), tachycardia (12%), dry mouth (10%), increased weight (9%), nasal congestion (8%), orthostatic hypotension (5%).

Warnings and Precautions: QTc prolongation, neuroleptic malignant syndrome, tardive dyskinesia, hyperglycemia/diabetes, seizures, orthostatic hypotension, agranulocytosis, priapism, hyperprolactinemia, impaired body temperature regulation, dysphasia, sudden cardiac death, cardiovascular accident, body temperature dysregulation.

Contraindications: Known hypersensitivity reaction to the product. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. **Pregnancy:** Category C. **Breastfeeding:** Not know if enters breast milk/not recommended.

Significant drug-drug interactions: Fanapt dose should be reduced by one-half when administered concomitantly with strong CYP2D6 inhibitors such as fluoxetine or paroxetine, in known slow CYP2D6 metabolizers, and in patients taking strong CYP3A4 inhibitors. Caution with centrally acting antihypertensives (due to its α 1-adrenergic receptor antagonism). Medications that prolong QTc; Check all drug-drug interactions
Generic Available: No

LURASIDONE (LATUDA) Antipsychotic risk profile: EPS: Mild to Moderate; TD Risk: Unknown; Sedation: Moderate; Metabolic Effects: Mild.

DOSING INFORMATION: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, CBC (for baseline WBC), EKG (to assess QTc) and AIMS test. **Initiation for Schizophrenia:** Week 1: Start 40 mg QDay; Take with meal. Week 2: Assess for side effects. Typical Target: 40 mg Qday. Typical Max dosage: 80 mg/day.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: Weight. Annually ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, AIMS test. Repeat CBC in patients with previous low WBC.

GENERAL INFORMATION: Atypical antipsychotic. **FDA Indications:** Schizophrenia. **Off-Label Indications:** No data yet. **Pharmacokinetics:** $T_{1/2}$ = 18hrs. **Side effects: Common:** Somnolence (22%), akathisia (15%), nausea (12%), parkinsonism (11%), agitation (6%), anxiety (6%). **Warnings and Precautions:** Seizures, orthostatic hypotension/syncope, neuroleptic malignant syndrome, hyperprolactinemia, leucopenia/neutropenia/agranulocytosis, hyperglycemia/diabetes/weight gain, tardive dyskinesia, sudden cardiac death, cardiovascular accident, body temperature dysregulation. Contraindications: Known hypersensitivity reaction to the product. Coadministration with a strong CYP3A4 inhibitor (e.g., ketoconazole) and inducer (e.g., rifampin). **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. **Pregnancy:** Category B. **Breastfeeding:** Unknown if enters breast milk/not recommended. **Significant drug-drug interactions:** Check all drug-drug interactions. **Generic Available:** No.

OLANZAPINE (ZYPREXA) Antipsychotic risk profile: EPS: Mild; TD Risk: Mild; Sedation: Moderate; Metabolic Effects: Severe.

DOSING INFORMATION: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, CBC (for baseline WBC), EKG (to assess QTc) and AIMS test. **Initiation for Schizophrenia:** Week 1: Start 5 mg QHS. Week 2: Assess for side effects and increase and increase dose to 10 mg QHS. Week 3 and beyond: Assess for side effects. If still symptomatic, consider further increase to 15-20 mg QHS. Typical Target: 10 mg QHS Maximum Dose: 20 mg QHS **Initiation for Bipolar Manic/Mixed Episode:** Week 1: Start 10 mg QHS. Week 2 and beyond: Assess for side effects and increase dose to 15 mg QHS as needed. Typical target: 10-15 mg QDay. Maintenance dosage typically lower than dose used in acute episodes. Maximum Dose: 20 mg QHS.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: Weight. Annually ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, and AIMS test.

GENERAL INFORMATION: Atypical antipsychotic. **FDA Indications:** Schizophrenia, Bipolar mania and mixed episode. **Off-Label Indications:** PTSD/OCD augmentation, Depression augmentation. **Pharmacokinetics:** $T_{1/2}$ = 30hr. **Side effects: Common:** Somnolence (35%), dry mouth (22%), dizziness (18%), fatigue (15%), dyspepsia (11%), constipation (9%), personality disorder (8%), tremor (6%), weight gain/increased appetite (6%), akathisia (5%), postural hypotension (5%). **Warnings and Precautions:** Neuroleptic malignant syndrome, hyperglycemia/diabetes, hyperlipidemia, weight gain, seizures, serotonin syndrome, manic switch, tardive dyskinesia, orthostatic hypotension, leukopenia/neutropenia/agranulocytosis, seizures, abnormal bleeding, hyponatremia, hyperprolactinemia, sudden cardiac death, cerebrovascular accident, QTc prolongation and body temperature dysregulation. Contraindications: Known hypersensitivity reaction to the product. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/not recommended.

Significant drug-drug interactions: MAO-inhibitors. Check all drug-drug interactions before prescribing.

Generic Available: Yes, moderate to expensive.

OLANZAPINE AND FLUOXETINE (SYMBYAX) Antipsychotic risk profile: EPS: Mild TD Risk: Mild Sedation:

Moderate Metabolic Effects: Severe

DOSING INFORMATION: Initiation for Bipolar Depression and Adjunctive Treatment for Major Depression:

Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, EKG (to assess QTc) and AIMS test. Week 1: Start Olanzapine 3 mg /Fluoxetine 25 mg QHS. Week 2 and beyond: Assess for side effects and increase dose to Olanzapine 6 mg /Fluoxetine 25 mg QHS as needed. Typical target: Olanzapine 6 mg /Fluoxetine 25 mg QHS. Maximum Dose: Olanzapine 12 mg /Fluoxetine 50 mg QHS.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: Weight. Annually ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, AIMS test. Repeat CBC in patients with previous low WBC.

GENERAL INFORMATION: Atypical antipsychotic combined with SSRI. **FDA Indications:** Bipolar Depression and Adjunctive Treatment for Major Depression. **Off-Label Indications:** None. **Pharmacokinetics:** T_{1/2} (olanzapine) = 30 hr; T_{1/2} (fluoxetine) = 4-6 days. **Side effects: Common:** Weight gain (25%), increased appetite (20%), dry mouth (15%), somnolence (14%), fatigue (12%), hypersomnia, peripheral edema (9%), tremor (9%), sedation (8%), vision blurred (5%), disturbance in attention (5%). **Warnings and Precautions:** Neuroleptic malignant syndrome, hyperglycemia/ diabetes, hyperlipidemia, weight gain, rash, manic switch, tardive dyskinesia, orthostatic hypotension, leucopenia/neutropenia/agranulocytosis, seizures, abnormal bleeding, hyponatremia, hyperprolactinemia, sudden cardiac death, cardiovascular accident, QTc prolongation, body temperature dysregulation. **Contraindications:** Known hypersensitivity reaction to the product. Do not use with an MAOI or within 14 days of discontinuing an MAOI due to risk of drug interaction. At least 5 weeks should be allowed after stopping Symbyax before starting treatment with an MAOI. Do not use with pimozide due to risk of drug interaction or QTc prolongation. Do not use with thioridazine due to QTc interval prolongation or potential for elevated thioridazine plasma levels. Do not use thioridazine within 5 weeks of discontinuing Symbyax. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis, (2) Increased initial risk of suicidality when used for treatment of depression. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/not recommended. **Significant drug-drug interactions:** Check all drug-drug interactions. **Generic Available:** No.

PALIPERIDONE (INVEGA)–Oral formulation Antipsychotic risk profile: EPS: Moderate; TD Risk: Moderate; Sedation: Moderate; Metabolic Effects: Moderate.

DOSING INFORMATION: Initiation for Schizophrenia and Bipolar Mania: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, and EKG (to assess QTc) and AIMS test. Week 1: 3 mg QDay in the morning. Week 2: Assess for side effects, consider increase to 6mg. Week 3 and beyond: Consider further increases in 3mg increments up to a maximum of 12 mg/day. Typical target: 6 mg Qday. Maximum Dose: 12 mg QDay.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: Weight. Annually ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, AIMS test. Repeat CBC in patients with previous low WBC.

GENERAL INFORMATION: Atypical antipsychotic. **FDA Indications:** Schizophrenia; Schizoaffective disorder (monotherapy or as adjunctive). **Off-Label Indications:** Bipolar, mixed or manic. **Pharmacokinetics:** T_{1/2} =23 hrs. **Side effects: Common:** Somnolence/fatigue (26%), extra-pyramidal symptoms (23%), akathisia (17%), headache (14%), tachycardia (14%), constipation (4%), orthostatic hypotension (4%), salivary hypersecretion (4%), weight gain (4%), gynocomastia (3%).

Warnings and Precautions: Sudden cardiac death, cardiovascular accident, neuroleptic malignant syndrome, QTc prolongation, tardive dyskinesia, hyperglycemia/diabetes/weight gain, hyperprolactinemia, GI narrowing, orthostatic hypotension, leucopenia/neutropenia/agranulocytosis, seizures, body temperature dysregulation.

Contraindications: Known hypersensitivity reaction to the product or Risperdal. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis.

Pregnancy: Category C. **Breastfeeding:** Enters breast milk/not recommended. **Significant drug-drug interactions:** Caution with anti-hypertensives, Tegretol, Depakote. Check all drug-drug interactions. **Generic Available:** No.

PERPHENAZINE (TRILAFON) Antipsychotic risk profile: EPS: Moderate; TD Risk: High; Sedation: Moderate; Metabolic Effects: Mild.

DOSING INFORMATION: Assess baseline Weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, CBC (for baseline WBC) and EKG (to assess QTc) and AIMS test. **Initiation for Schizophrenia:** Week 1: Start perphenazine 4 mg BID. Week 2: Assess for side effects and increase to 8 mg BID. Week 3 and beyond: Assess for side effects and consider further increases to 12 mg BID if still symptomatic. If QAM dosage is excessively sedating consider consolidating more of the dose to QHS. Typical Target: 12-24 mg/day. Max Dosing: 24 mg/day as an outpatient.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: Weight. Annually ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile and AIMS test.

GENERAL INFORMATION: Typical antipsychotic. **FDA Indications:** Schizophrenia. **Pharmacokinetics:** T_½ = 9-12 hrs. **Side Effects: Common:** Extra-pyramidal symptoms (seen at higher doses; Parkinsonism, akathisia), orthostatic hypotension, sedation/fatigue and anticholinergic effects. **Warnings/Precautions:** Tardive dyskinesia, neuroleptic malignant syndrome, suicidality, lowers seizures threshold, temperature dysregulation, orthostatic hypotension, QTc prolongation, hyperprolactinemia, sudden cardiac death, cerebrovascular accident, body temperature dysregulation. **Contraindications:** Blood dyscrasia, bone marrow depression, liver damage, subcortical brain damage (vulnerability to hyperthermia). **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. **Pregnancy:** Category C **Breastfeeding:** Enters breast milk/not recommended; AAP “of concern”. **Significant drug-drug interactions:** Check all drug-drug interactions before prescribing. **Generic Available:** Yes, inexpensive.

QUETIAPINE (SEROQUEL (IR), SEROQUEL XR) Antipsychotic risk profile: EPS: Mild; TD Risk: Mild; Sedation: Moderate; Metabolic Effects: Moderate.

DOSING INFORMATION: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, CBC (for baseline WBC), EKG (to assess QTc) and AIMS test. **Initiation for Schizophrenia or Bipolar Manic/Mixed Episode:** Week 1 -Start Seroquel-IR: Day 1, 25 mg BID; Day 2, 50 mg BID; Day 3, 100 mg BID; Day 4, 150 mg BID and Day 5, 200 mg BID. At higher daily dosages consider scheduling a greater proportion of dose QHS to limit daytime sedation. Week 1 -Start Seroquel-XR: Day 1, 50 mg QHS; Day 2, 100 mg QHS; Day 3, 200 mg QHS; Day 4, 300 mg QHS and Day 5, 400 mg QHS. Week 2: Assess for side effects. Can consider further increases in 100 mg increments up to max of 800 mg total daily dose for either Seroquel-IR or Seroquel-XR. This titration schedule can be slowed down because of side effects. Typical Target: 400-800 mg. **Initiation for Bipolar Depression:** Week 1 -For both Seroquel-IR and Seroquel-XR: Day 1, 50 mg QHS; Day 2, 100 mg QHS; Day 3, 200 mg QHS; and Day 4, 300 mg QHS (usual maximum dose for this indication.) Typical Target: 300 mg. **Initiation for Adjunctive Treatment for Typical Target Major Depression:** Week 1: Seroquel-XR Day 1, 50 mg QHS; Day 2, 100 mg QHS; Day 3, 150 mg QHS.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: weight. At 8 weeks: weight. At 12 weeks: weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: weight. Annually /ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile and AIMS test. Consider checking for cataracts.

GENERAL INFORMATION: Atypical antipsychotic. **FDA Indications:** Schizophrenia (IR, XR), Bipolar I – manic (IR, XR), Bipolar I – mixed (XR), Bipolar disorder – depressive episode (IR, XR), Bipolar maintenance as adjunctive to lithium or divalproex (IR, XR), Adjunctive treatment of MDD (XR). **Off-Label Indications:** Anxiety disorders augmentation. **Pharmacokinetics:** T_½ = 6hr (IR); 7-12 hrs (XR). **Side effects: Common:** Seroquel IR: Headache (21%), somnolence (18%), dizziness (11%), dry mouth (9%), constipation (8%), dyspepsia (5%), rash (4%), abdominal pain (4%), postural hypotension (4%). Seroquel XR: Somnolence (50%), dry mouth (34%), constipation (10%), dizziness (10%), dyspepsia (7%), weight gain (7%), fatigue (7%), dysarthria (5%), nasal

congestion (5%), weight gain (5%), ALT/AST increased (5%), increased appetite (4%). **Warnings and Precautions:** QTc prolongation, orthostatic hypotension, hyperglycemia/diabetes, hyperlipidemia, leukopenia/neutropenia/agranulocytosis, tardive dyskinesia, neuroleptic malignant syndrome, tardive dyskinesia, weight gain, cataracts, seizures, priapism, sudden cardiac death, cardiovascular accident, body temperature dysregulation. **Contraindications:** Known hypersensitivity reaction to the product. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. (2) Increased initial risk of suicidality when used for treatment of depression. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/use caution. **Significant drug-drug interactions:** Caution with medications that cause QTc prolongation. Check all drug-drug interactions before prescribing. **Generic Available:** No; Anticipated 2012.

RISPERIDONE (RISPERDAL) Antipsychotic risk profile: EPS: Moderate; TD Risk: Moderate; Sedation: Moderate; Metabolic Effects: Moderate.

DOSING INFORMATION: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, CBC (for baseline WBC), EKG (to assess QTc) and AIMS test. **Initiation for Schizophrenia:** Week 1: Start risperidone 1 mg QHS. Week 2: Assess for side effects and increase risperidone to 1 mg BID. Week 3: Assess for side effects and increase to 1 mg QAM and 2 mg QHS. If QAM dosage is excessively sedating consider consolidating more of the dose to QHS. Week 4 and beyond: Assess side effects and consider further increases in 1 mg increments until symptom remission or max dose of 6 mg reached. **Initiation for Bipolar Mania and Mixed Episodes:** Week 1: Start risperidone 1-2 mg QHS. Week 2: Assess for side effects and increase risperidone to 1 QM and 1-2 mg QHS. Week 3 and beyond: Assess for side effects and consider further increases in 1mg increments until symptom remission or max dose of 6 mg reached. If QAM dosage is excessively sedating consider consolidating more of the dose to QHS. Typical Target: 3-4 mg/day (note: dosages above 4 mg/day are much more likely to be associated with EPS).

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter: Weight. Annually /ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, and AIMS test.

GENERAL INFORMATION: Atypical antipsychotic. **FDA Indications:** Bipolar mania and mixed episode; Schizophrenia. **Off-Label Indications:** Depression augmentation, anxiety disorders augmentation.

Pharmacokinetics: $T_{1/2} = 20$ hrs. **Side effects: Common:** Insomnia (32%), extra-pyramidal symptoms (Parkinsonism (25%), akathisia (10%)), anxiety (16%), nausea (9%), dizziness (7%), sedation/fatigue (6%), weight gain, dry mouth (4%), tremor (3%), orthostatic hypotension (2%). **Warnings and Precautions:** Sudden cardiac death, cerebrovascular accident, orthostatic hypotension, QTc prolongation, neuroleptic malignant syndrome, hyperprolactinemia, leucopenia/neutropenia/agranulocytosis, seizures, hyperglycemia/diabetes/weight gain, tardive dyskinesia, priapism, thrombotic thrombocytopenic purpura, body temperature dysregulation.

Contraindications: Known hypersensitivity reaction to the product. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/not recommended. **Significant drug-drug interactions:** Caution with anti-hypertensives (because of orthostatic hypotension). Check all drug-drug interactions before prescribing. **Generic available:** Yes; Moderately expensive.

ZIPRASIDONE (GEODON) Antipsychotic risk profile: EPS: Moderate; TD Risk: Mild; Sedation: Moderate; Metabolic Effects: Mild.

DOSING INFORMATION: Assess baseline weight, waist circumference, blood pressure, fasting plasma glucose, fasting lipid profile, CBC (for baseline WBC), EKG (to assess QTc) and AIMS test. **Initiation for Schizophrenia:** Week 1: Start 20 mg twice daily (with food). Week 2 and beyond: Assess for side effects and consider increase to 40 mg BID as needed. **Initiation for Bipolar Mania and Mixed Episodes:** Week 1: Start 40 mg twice daily (with food). Week 2 and beyond: Assess for side effects and consider further increase consider increase to 60 mg - 80 mg BID as needed. Maintenance: Range 20 - 100 mg BID; however, dosages >80 mg twice daily are generally not recommended.

ONGOING MONITORING: EKG at target dose (at least once to assess QTc). At 4 weeks: Weight. At 8 weeks: Weight. At 12 weeks: Weight, blood pressure, fasting plasma glucose, fasting lipid profile. Quarterly thereafter:

Weight. Annually ongoing: Waist circumference, weight, blood pressure, fasting plasma glucose, fasting lipid profile, and AIMS test.

GENERAL INFORMATION: Atypical antipsychotic. **FDA Indications:** Bipolar mania and mixed episode (monotherapy and as adjunctive to lithium and Depakote), Schizophrenia maintenance. **Off-Label Indications:** Schizoaffective disorder. **Pharmacokinetics:** T_{1/2} = 7hrs. **Side effects: Common:** Somnolence (14%), extrapyramidal symptoms (14%), dizziness (8%), akathisia (8%), respiratory tract infection (8%), abnormal vision (6%), asthenia (5%), vomiting (5%). **Warnings and Precautions:** QTc prolongation, neuroleptic malignant syndrome, tardive dyskinesia, hyperglycemia/diabetes, rash, orthostatic hypotension, leukopenia/neutropenia /agranulocytosis, seizures, dysphagia, hyperprolactinemia, priapism, sudden cardiac death, cerebrovascular accident, body temperature dysregulation. **Contraindications:** Known hypersensitivity reaction to the product. Do not use in patients with a known history of QT prolongation. Do not use in patients with recent acute myocardial infarction. Do not use in patients with uncompensated heart failure. Do not use in combination with other drugs that have demonstrated QT prolongation. **Black Box Warnings:** (1) Increased mortality in elderly patients with dementia related psychosis. **Pregnancy:** Category C. **Breastfeeding:** Enters breast milk/not recommended. **Significant drug-drug interactions: Contraindicated:** *Methadone, many others including any medications that prolong QTc.* Check all drug-drug interactions before prescribing. **Generic Available:** No.

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