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UNDERSTANDING THE ROLE OF PSYCHOTROPIC MEDICATIONS IN MAINTAINING MENTAL HEALTH

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TRENDS IN MENTAL HEALTH IN COLLEGE SETTINGS

- National Collegiate Health Assessment (2013)
- Annual Report from the Center for Collegiate Mental Health (2016)
- National Survey of College Counseling Centers (2014)
- Center for Collegiate Mental Health (2016)

TRENDS IN MENTAL HEALTH IN COLLEGE SETTINGS

- There has **not** been an increase in the prevalence of mental health problems in students referred for counseling over the past 6 years but there has been an increase in the severity of the symptoms
- 94% of campus directors reported greater number of students with **severe** psychological problems (44% in 2013; 52% in 2014)
- Average number of psychiatric hospitalizations was 1.5 per 1,000
- Increased history of SIB and serious suicidal ideations annually for the past 6 years
- 125 suicides in 2013 (85% had not sought counseling; 70% males; 80% undergraduates; 77 % Caucasian)

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TRENDS IN MENTAL HEALTH IN COLLEGE SETTINGS

- Use has increased at 5 to 7 times the rate of institutional growth
- Women are higher utilizers of services at college counseling centers (60% vs. 36 %)
- Racial/ethnic use proportionate to campus enrollment, but higher levels of severity
- 50% of clients had been in counseling previously (24% general student body)
- 33% have taken a psychotropic medication previously (8% general student body)
- 10% have been hospitalized previously (2% general student body)
- 60% of those who present for care continue to be symptomatic 2 years later
- Less than 50% with symptoms ever present for treatment

TRENDS IN MENTAL HEALTH IN COLLEGE SETTINGS

Top 10 reasons for seeking help:

- Anxiety
- Depression
- Relationship problem
- Stress
- Family problems
- Academic performance
- Interpersonal functioning
- Grief/loss
- Mood instability
- Adjustment to a new environment

TRENDS IN MENTAL HEALTH IN COLLEGE SETTINGS

Most Common Diagnoses:

- Anxiety (11.9%)
- Depression (7- 9%)
- Bipolar Disorder (3.2%)
- Eating Disorders (9.5%)
- ADHD (2-8%)
- ASD (0.7 – 1.9%)

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TREATMENT OPPORTUNITIES

Counseling Center Model

- Prevention/outreach
- Social media, text campaigns for prevention and screening
- Access, increased need
- Evidence based treatments
- Access to online treatment models

Integrated Health Care Models

- Co-located Services
- Coordinated Services
- Fully Integrated Care

ATTENTION DEFICIT HYPERACTIVITY DISORDER

- Symptoms must be present prior to age 7
- Symptoms must last longer than 6 months
- Symptoms must impair functioning (e.g. school, work, family, relationships)
- Boys often referred at an earlier age due to hyperactivity
- Girls often go undiagnosed for years (silent sufferers)
- Approx. 50% of children outgrow symptoms in adolescence; 50% remain symptomatic into adulthood
- Adults generally demonstrate fewer symptoms as they age

ATTENTION DEFICIT HYPERACTIVITY DISORDER

Attentional Symptoms

- Difficulty sustaining attention, hard time remembering previous conversations
- "Zoning out" without realizing it, even in the middle of a conversation
- Easily distracted
- Careless or sloppy work
- Poor planning, tendency to overlook details
- Errors or incomplete work
- Problems following through and completing task, poor organizational skills

ATTENTION DEFICIT HYPERACTIVITY DISORDER

Attentional Symptoms

- Underestimating the time it will take you to complete tasks
- Forgetfulness leading to missed deadlines and forgotten meetings or social plans
- Frequently loses things (e.g. keys, wallet, phone, documents, bills).
- Difficulty prioritizing, starts multiple projects without finishing any
- Poor time management skills, late with assignments, late to class or meetings
- Trouble multitasking;“spazzed out” by multiple directions/instructions at one time

ATTENTION DEFICIT HYPERACTIVITY DISORDER

Hyperactivity Symptoms

- Excessive activity or restlessness
- Difficulty sitting through long lectures or classes
- Always on the go, constantly engaged in an activity
- Talking excessively, interrupting others, poor listening skills
- Poor planning
- Feelings of inner restlessness, agitation, racing thoughts
- Getting bored easily, craving for excitement, tendency to take risks
- Acting recklessly or spontaneously without regard for consequences

ATTENTION DEFICIT HYPERACTIVITY DISORDER

- Poor school or work performance
- Trouble staying motivated
- Unstable relationships
- Low frustration tolerance
- Frequent mood swings
- Suicide attempts
- Hot temper
- Trouble coping with stress
- Unemployment
- Trouble with the law
- Alcohol or other substance abuse
- Frequent car accidents or other accidents
- Poor physical and mental health
- Poor self-image, low self-esteem

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ATTENTION DEFICIT HYPERACTIVITY DISORDER

- Adults with ADHD do have the ability focus on activities that are stimulating and rewarding (e.g., video games, reading, painting)
- Tendency to hyperfocus on these activities
- Coping mechanism for distraction—a way of tuning out the chaos
- Oblivious to everything going on around them to the point of losing track of time and neglecting other responsibilities

STIMULANTS

Methyphenidate

Dextroamphetamine

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STIMULANTS
Methylphenidate Derivatives

Short-Acting

- Dexmethylphendiate (Focalin)
- Methylphenidate (Ritalin)

Intermediate/Long Acting

- Methylphenidate
  - Ritalin SR
  - Metadate ER
  - Methylin ER
  - Concerta
  - Daytrana
  - Metadate CD
  - Quillivant XR
  - Quillichew ER
  - Ritalin LA

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STIMULANTS
Dextroamphetamine Derivatives

Short Acting

- Amphetamine/Dextroamphetamine (Adderall, Adderall XR)
- Dextroamphetamine (Dexedrine, ProCentra, Zenzedi)

Intermediate/Long Acting

- Dexmethylphenidate (Focalin XR)
- Dextroamphetamine (Adderall XR, Adzenys XR-ODT)
- Lisdexamfetamine (Vyvanse)
- Amphetamine sulfate (Evekeo)
- Mixed salts of a single-entity amphetamine product (Mydayis)

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MECHANISM OF ACTION

- Mechanism of action unknown; thought to block the reuptake of norepinephrine and dopamine into presynaptic neurons and increase their availability in the extraneural space
- Choice usually made based upon physician familiarity, timed release mechanism, tolerance related to side effects
- All about 85% effective

- Short acting stimulants work in 20 minutes and last 3 – 4 hours

✓ Used when there is a history of poor appetite and poor weight gain
✓ Dosed multiple times a day (on/off effect during day)

- Long acting stimulants work in 20 minutes and last 8 – 12 hours

✓ 1 dose/day; steady state during day
✓ No appetite during day, may affect sleep if taken too late in the day
✓ Rebound hyperactivity

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SIDE EFFECTS OF STIMULANTS

Appetite Suppression
Increased Blood Pressure
Growth Suppression
Headaches
Stomachaches
Tics
Rebound Irritability

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CONTRAINDICATIONS TO STIMULANTS

- Glaucoma
- Severe anxiety tension, agitation, or nervousness
- Tics or Tourette's Disorder
- A history of psychosis
- Currently taking monoamine oxidase inhibitors phenelzine (Nardil) or tranylcypromine (Parnate)

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MEDICATIONS COMMONLY USED TO TREAT ADHD

First Line Agents

Straterra (Atomoxetine)

Second Line Agents

Tofranil (Imipramine)
Wellbutrin (Bupropion)
Catapres (Clonidine)
Tenex (Guanfacine)/Intuniv

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FIRST LINE AGENTS

Atomoxetine (Straterra)

- Antidepressant , selective norepinephrine reuptake inhibitor
- Mild to moderate improvement in irritability
- Dose 25-80 mg, or 1.2 mg/kg
- Requires daily dosing, may take 4-6 weeks to see improvement
- Side effects: dry mouth, appetite suppression, agitation, panic, GI sx's, insomnia, may cause severe liver damage

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SECOND LINE AGENTS FOR ATTENTION

Bupropion (Wellbutrin)

- Antidepressant/Anxiolytic, helpful in mood changes in substance abusing children
- dose 75-450 mg; Regular, SR, XL, Zyban
- Weak blocker of NE, 5HT, Dopa; CNS stimulant effect
- Side Effects: agitation, dry mouth, tremor, increased risk of seizures in those who have a seizure disorder or an eating disorder

Imipramine (Tofranil)

- Tricyclic antidepressant, dose 25-200 mg
- Blocks reuptake of NE
- Also used to treat bedwetting, sleep, migraines, and neuropathy in lower doses
- Side Effects: Sedation, dry mouth, low blood pressure, blurred vision, constipation, cardiac problems; Requires EKG

SECOND LINE AGENTS FOR IMPULSIVITY

- **Clonidine** (Catapress): pill or patch, 0.1-0.3 mg daily
- **Tenex** (Guanfacine, Intuniv): 1-4 mg daily

- Anti-hypertensives stimulate alpha adrenergic receptors which decreases sympathetic outflow and peripheral resistance
- Improves hyperactivity, aggression, and sleep
- No effect on attentional symptoms
- Effective in 2-3 days, increases over time (weeks)
- Side Effects: May affect heart rate and rhythm along with blood pressure, headaches, dizziness, dry mouth, constipation, fluid retention, and nervousness; depression, sedation
- Abrupt cessation may cause rebound hypertension

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ALTERNATIVE WAYS TO MANAGE ADHD

- Avoid foods with food coloring
- Dietary changes (A high-protein diet, fewer simple carbohydrates, more complex carbohydrates, more omega-3 fatty acids, elimination diets)
- Get tested for allergies and avoid allergens
- Zinc, L-carnitine, vitamin B-6, magnesium, Omega-3 fatty acids, ginkgo, ginseng,
- Caffeine
- Neurofeedback therapy

ALTERNATIVE WAYS TO MANAGE ADHD

- Establish routines
- Maintain a regular sleep cycle
- Make lists for different tasks and activities
- Use a calendar to schedule events in the moment, don't put it off until later
- Use reminder notes or set phone alarms (esp. for meds)
- Assign a special place for keys, bills, and paperwork
- Break down large tasks into more manageable, smaller steps (e.g., do lit search, read articles, develop outline, write 5 pages each day)
- Schedule in frequent breaks
- Time engagement in pleasurable activities with an alarm
- Behavioral Therapy and Cognitive Behavioral therapy
- Family and marital therapy
- Join a support group: CHADD (http://www.chadd.net/template.cfm?affid=193&p=about)

MAJOR DEPRESSION

- Ave. age of onset is mid-20’s (age decreasing in past decade)
- Lifetime risk is 10-25% or women, 5-12% for men
- Twice as common in adolescent and adult females than males
- Increased genetic risk in families (Those with a parent or sibling who has had major depression may be 1.5 to 3 times more likely to develop the condition)
- 60% of people with first episode will have a second episode
- Two-thirds fully recover from the first episode; one-third may recover only partially
- Affected individuals experience more pain and physical illness
- Up to 15% of individuals with severe depression die by suicide
- Symptoms must impair functioning
- 5 or more symptoms must be present in the same 2 week period
- Symptoms can last up to 12 months if untreated

MAJOR DEPRESSION

Symptoms

- Depressed mood
- Diminished interest in pleasurable activities
- Weight loss/appetite reduction or weight gain/increased appetite
- Insomnia or hypersomnia
- Psychomotor retardation or agitation
- Fatigue or loss of energy
- Feelings of worthlessness or guilt
- Decreased concentration or indecisiveness
- Recurrent thoughts of death
- 10-15% adolescents or young adults with a first episode of MDE go on to develop Bipolar Disorder

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MAJOR DEPRESSION

- **Possible specifiers to describe the episode:**
  Severity: mild, moderate, severe without psychotic features
  Severe With Psychotic Features
  In Partial/Full Remission
  With Catatonic Features
  With Melancholic Features
  With Atypical Features
  With Postpartum Onset
  Longitudinal Course
  With Seasonal Pattern

- **Major Depressive Disorder, Recurrent:**
  Two or more major depressive episodes with at least two months in between in which no major depressive episode was present.

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MEDICATIONS USED TO TREAT DEPRESSION

Tricyclic Antidepressants

Nortriptyline
Amitriptyline
Imipramine
Desipramine
Clomipramine
Sinequan
Trazadone

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TRICYCLIC ANTIDEPRESSANTS (TCA'S)

- Increase Norepinephrine (NE) levels, 200-400 mg
- Effective in 3 – 4 weeks
- **Side Effects**: Sedation, dry mouth, orthostatic hypotension, blurred vision, constipation, cardiac problems
- Effective in treating chronic pain syndromes, migraine headaches, insomnia, and bedwetting in low doses
- Rarely used for depression due to side effect profile
- May require blood levels if used in higher doses
- Can become toxic at higher levels; high likelihood of death in overdose

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MEDICATIONS USED TO TREAT DEPRESSION

Selective Serotonin Reuptake Inhibitors (SSRI'S)

Prozac/Fluoxetine (10-40 mg)
Paxil/Paroxetine (10-40 mg)
Paxil CR (90 mg, lasts 1 week)
Zoloft/Sertraline (50-200 mg)
Celexa/Citalopram (20-60 mg)
Lexapro/Escitalopram (10-30 mg)
*Viibryd/Vilazodone (10-40 mg)
*Trintellix/Vortioxetine (5-20 mg)

SELECTIVE SEROTONIN REUPTAKE INHIBITORS (SSRI'S)

- Safer, well-tolerated, requires no blood monitoring, non-fatal in overdose
- Often used to treat anxiety related disorders (Panic Attacks, Phobias, Post-Traumatic Stress Disorder, Generalized Anxiety) in higher doses
- Effective in 4–6 weeks
- **Side Effects:** Headaches, nausea, agitation, sexual dysfunction; flu-like symptoms if discontinued rapidly; decreased libido; sexual dysfunction; serotonergic crisis with increased temperature, blood pressure, and heart rate occurs when used in combination with similar agents, or may be dose related
- Increased suicidal ideations

MEDICATIONS USED TO TREAT DEPRESSION

SNRI's

Serzone (Nefazadone) 300-600 mg
Effexor (Venlafaxine) 75-225 mg
Remeron (Mirtazapine) 15-45 mg
Duloxetin (Cymbalta) 30-60 mg
Desvenlafaxine (Pristiq) 50-400 mg
Levomilnacipran (Fetzima)
Milnacipran (Ixel, Savella)

MIXED AGENTS

Bupropion (Wellbutrin), 75-450 mg

SNRI'S/ MIXED AGENTS

- Increases levels of both Norepinephrine and Serotonin
- May take 3-4 weeks for effectiveness to develop
- **Serzone**: liver issues which can be fatal, dizziness, headaches, dry mouth, nausea, sedation; contraindicated with Tegretol, MAOI's, Halcion (not available in the U.S.)
- **Effexor:** nausea, dry mouth, dizziness, sedation, sweating, decreased libido, abnormal ejaculation in men, hypertension
- **Remeron:** sedating, used for sleep a lot, weight gain, orthostatic hypotension
- **Cymbalta:** sedation, dry mouth, headaches, marketed for pain associated with depression
- **Wellbutrin/Bupropion:** Least likely to precipitate mania

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MONOAMINE OXIDASE INHIBITORS

- **Nardil/Phenelzine**, 45-90 mg
- **Parnate/Tranylcypromine**, 30-60 mg

- Increases levels of Norepinephrine, Serotonin, and Epinephrine
- Used to treat atypical depression
- Requires a tyramine free diet
- **Side effects:** postural hypotension, anxiety, agitation, insomnia, weakness, dizziness, dry mouth, nausea, diarrhea, constipation
- Contraindicated with Buspar, SSRIs, TCAs, anesthesia, amphetamines, cocaine, narcotics, alcohol, antihypertensives, antihistamines, diuretics, Wellbutrin, anesthesia, meperidine, sedatives, dextromorphan, Guanethidine, tryptophan, excessive caffeine, tyramine containing foods. May cause a FATAL HYPERTENSIVE CRISIS.

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BIPOLAR DISORDER

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BIPOLAR DISORDER

- Lifetime prevalence is 0.4 – 1.6%
- Ave. age of onset is 20 years
- Equally common in males and females
- First episode more likely to be depression in females and mania in males
- Must have at least 1 episode of depression lasting two weeks and 1 episode of mania lasting 1 week to meet criteria
- Manic symptoms often emerge after treatment with an antidepressant for depression
- Completed suicide occurs in 10-15% of those affected
- High comorbidity with alcohol and drug abuse

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BIPOLAR DISORDER

Manic Symptoms

- Inflated self esteem or grandiosity
- Decreased need for sleep
- Increase in goal directed activities
- Excessive talking with rapid speech
- Racing thoughts or flight of ideas
- Distractibility or poor attention span
- Excessive involvement in pleasurable activities
- High risk or dangerous behaviors
- Mood is often irritable and behavior aggressive in kids
- Psychotic symptoms may be present

OTHER MOOD DISORDERS

Disruptive Mood Dysregulation Disorder (DMDD)-severe and frequent temper tantrums that interfere with one's ability to function (onset before age 10 years)

Cyclothymia- Low grade mania and depression lasting greater than 1 year in children and 2 years in adults

Dysthymia- Low grade depression lasting longer than 1 year in children and 2 years in adults

Intermittent Explosive Disorders- Explosive behavior that has a sudden onset and offset that is out of proportion to the trigger

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MOOD STABILIZERS

Lithium/Lithium Carbonate

Depakote/Divalproex Sodium

Tegretol/Carbamazepine

Trileptil/Oxcarbamazepine

Topomax/Topiramate

Neurontin/Gabapentin

Lamictal/Lamotrigine

Keppra/Levetiracetam

ANTICONVULSANTS

THESE ALL REQUIRE BLOOD LEVELS, EFFECTIVE IN 1-2 WEEKS

- **Lithium:** A natural salt; mechanism of action unclear; dose 450-1800 mg; CR or ER; **only non-anticonvulsant**
- Therapeutic levels are affected by salt and water intake, urinary output, and sweat
- May lose effectiveness with noncompliance
- Common Side Effects: thyroid dysfunction, nausea, diarrhea, kidney problems, weight gain, headache, fine hand tremor, acne, and skin rashes
- **Depakote:** dose 500-2000 mg, ER causes less weight gain
- Side Effects: nausea, vomiting, weight gain, sedation, clumsiness, decrease in blood cells, liver damage, and polycystic ovarian disease
- **Tegretol:** dose 200-900 mg, XR form
- Side Effects: sedation, dizziness, clumsiness, blurred or double vision, hair loss, nausea, and increased sensitivity to the sun. Serious side effects include liver and kidney damage, lung irritation, dramatic drops in blood cells, and severe skin rashes.

ANTICONVULSANTS

NO BLOOD LEVELS REQUIRED

- **Trileptal:** dose 600-1200 mg
- May cause dizziness, sedation, abdominal discomfort, fatigue, abnormal gait, and double vision
- **Topomax:** dose 100-400 mg
- May cause nausea, tremor, fatigue, dizziness, abnormal gait, sedation, psychomotor slowing, gradual weight loss
- **Neurontin:** dose 900-1800 mg
- May cause agitation, sedation, fatigue, dizziness, ataxia, tremor
- **Lamictal:** 100-400mg
- May cause stomach upset, coordination problems, dizziness, flu-like symptoms, infection, gradual weight loss, and rashes
- **Keppra:** 1000-3000 mg
- May cause tingling sensations, dizziness, sedation, and infection

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ATYPICAL ANTIPSYCHOTICS

Seroquel (Quetiapine)
Geodon (Ziprasidone)
Zyprexa (Olanzapine)
Abilify (Aripripazole)
Risperidol/Invega (Risperidone)
Clozaril (Clozapine)

Studies available that support the use of these agents as monotherapy in acute mania, or in combination with mood stabilizers. Will discuss in detail under Schizophrenia.

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SCHIZOPHRENIA

- Prevalence rates of 0.5% to 1.5%
- Slightly higher incidence in men
- First degree relatives have a 10x greater risk of developing the illness
- Age of onset between late teens and mid-30's
- Poor prognosis: decline in functioning with each episode, shortened life span, 10% successfully complete suicide, 60-70% never marry
- Factors that improve prognosis include: good pre-morbid adjustment, acute onset, later age of onset, being female, mood disturbance, medication initiation soon after onset, medication compliance, brief duration of active phase symptoms, good inter-episode functioning, normal neurological functioning, family history of a mood disorder, no family history of Schizophrenia
- Symptoms must be present for at least 6 months (may include prodromal and residual phases) and impair functioning for diagnosis

SCHIZOPHRENIA

Symptoms

- Positive Symptoms: Delusions (persecutory and referential are most common); Hallucinations (auditory most common); Disorganized speech (loose associations, tangential, incoherent)

- Negative symptoms**:** flat affect, decreased emotional range, slow thought processes and speech, lack of initiation of activities, loss of interest, inertia, poverty of speech

- Cognitive Symptoms: poor working memory and executive functioning, inability to abstract, difficulty understanding nuances and subtleties of interpersonal cues and relationships

- Mood Symptoms: cheerfulness or sadness that is out of context

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ANTIPSYCHOTIC MEDICATIONS

- Helpful in a variety of psychiatric illnesses to target symptoms
- Psychosis related to Schizophrenia, PTSD, Depression, Bipolar Disorder, Personality Disorders
- Aggression related to Intermittent Explosive Disorder, Organic Syndromes, low IQ, ASD
- Agitation/low frustration tolerance related to various disorders
- Thought Disorganization related to low cognitive functioning, Bipolar Disorder, Psychosis, PTSD, Personality Disorders
- Impulsivity related to ADHD, Organic syndromes
- Sleep disturbance

OLDER NEUROLEPTICS

- **Thorazine** (Chlorpormazine), 50-200 mg
- **Mellaril** (thioridazine), 200-800 mg
- **Trilafon** (perphenazine), 6-24 mg
- **Stelazine** (trifluoperazine)15-40 mg
- **Navane** (thiothixene), 20-60 mg
- **Haldol** (haloperidol), usually 1-20 mg; decanoate shot lasts 1 month
- **Prolixin** (fluphenazine), 5- 60 mg; decanoate shot lasts 2 weeks
- **Serentil** (mesoridazine), 160-400 mg
- **Moban** (Molindone), 50-225 mg
- **Loxitane** (Loxapine), 10-100mg
- **Orap** (Pimozide), 1-10 mg, only indicated for verbal and motor tics

Side Effects- EPS (stiff tongue/joints), sedation, hypotension, tremor, lowers seizure threshold, neuroleptic malignant syndrome, tardive dyskinesia, agranulocytosis, ITP, anti-emetic; Mellaril- retinitis pigmentosa

PROPRIETARY AND CONFIDENTIAL

NEWER/ATYPICAL ANTIPSYCHOTICS

- **Zyprexa (Olanzapine):**10-20 mg, dissolvable tab/pill, Dopa and 5HT antagonist. Also antagonizes cholinergic, histaminergic, and adrenergic receptors. Side effects: Asthenia, **weight gain**, orthostasis, glucose intolerance.

- **Risperdal (Risperidone):** 4-8 mg, liquid, dissolvable tab, shot that lasts 2 weeks; antagonizes Dopa and 5HT. Also antagonizes adrenergic and histaminergic receptors. Side effects: weight gain, galactorrhea, gynecomastia, orthostasis, rhinitis, anti-emetic effect, and glucose intolerance.

- **Invega** (Paliperidone), 6-12 mg, same mechanism as Risperidal, increased QTC interval, akathisia, salivary hypersecretion, peak concentrations reached in 24 hours. Side effects: weight gain, galactorrhea, gynecomastia, orthostasis, rhinitis, anti-emetic effect, and glucose intolerance.

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NEWER/ATYPICAL ANTIPSYCHOTICS

- **Seroquel (Quetiapine):** 25-900 mg, 5HT and Dopa antagonist. Also antagonizes histaminergic and adrenergic receptors. Side effects: sedating, **weight gain**. Often used for insomnia. Mainly histamine effects <200 mg (sleep) and Dopa effects > 200 mg (psychosis).
- **Geodon (Ziprasidone):** 40-160 mg, IM available, Dopa and 5HT antagonist. Moderate antagonist of alpha adrenergic and histaminergic receptors. Side effects: weight neutral, prolongs QTC interval.
- **Abilify (Aripiprazole):** 5-20 mg, Dopa and 5HT antagonist, available in a lon-acting injectable (Abilify Maintena, Aristada) Side effects: tremor, mild weight gain, EPS.
- **Clozaril (Clozapine):** 300-450 mg, potent Dopa antagonist mainly in the limbic and non-striatal region, therefore little EPS. Also antagonizes cholinergic, histaminergic, Adrenergic, and serotonergic receptors. Side effects: agranulocytosis, othostasis, glaucoma, prostate enlargement, GI peristalsis, hepatitis, transient fever, pulmonary emboli, and glucose intolerance.

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OBSESSIVE COMPULSIVE DISORDER

- Prevalence rate of 2.5% in adults
- Onset occurs earlier in males (ages 6-15) than females (ages 20-29)
- Prevalence rate equal in males and females (1.2%)
- 20-30% patients have a current or past history of tics
- A subset of patients have acute pre-pubertal onset associated with Streptococcal infections
- Diagnosis requires that symptoms are ego-dystonic in adults
- Behaviors occur at least one hour per day
- Usually a “waxing and waning” course

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OBSESSIVE COMPULSIVE DISORDER

Obsessions

- Recurrent and persistent thoughts, impulses, or images
- Thoughts or impulses are not simply excessive worries about everyday life problems
- Person attempts to suppress or ignore the thoughts or impulses
- Person recognizes that the thoughts or impulses are products of his/her mind
- Most common obsessions are about contamination, repeated doubts, need to have things in order, aggressive or horrific impulses, and sexual imagery

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OBSESSIVE COMPULSIVE DISORDER

Compulsions

- Goal of repetitive behaviors is to reduce or prevent anxiety or distress
- Most common compulsions involve washing and cleaning, counting, checking, requesting or demanding assurances, repeating actions, ordering, touching, tapping, list making, hoarding

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MEDICATIONS USED TO TREAT OCD

- Clomipramine (TCA)
- SSRI's
- Luvox (Fluvoxamine): 100-300 mg, serotonergic (5HT) agonist. Side effects: stomach upset, muscle aches, headache, sedation or insomnia.

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GENERALIZED ANXIETY DISORDER

- Twice as common in women than men
- Lifetime prevalence rate of 5%
- Tend to be perfectionistic and overly conforming
- Worry about health, money, school, work, family
- They have excessive concerns about punctuation and often redo tasks
- Excessive anxiety and worry has to be present for 6 months for diagnosis
- Person has to find it difficult to control the worry
- Must have at least 3 additional symptoms
- Course is generally fluctuating, worsening during periods of stress

GENERALIZED ANXIETY DISORDER

Symptoms

- Restlessness or feeling keyed up, fidgety
- Easily fatigued
- Difficulty concentrating or mind going blank
- Irritability
- Muscle tension, headaches
- Sleep disturbance
- GI symptoms (difficulty swallowing, nausea, vomiting, diarrhea)
- Sweating
- Numbness in hands and feet

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SOCIAL ANXIETY DISORDER

- Lifetime prevalence rates of 3% to 13%
- Accounts for 10% to 20% of all anxiety disorders
- More common in women than men
- Requires a marked and persistent fear of social or performance situations with unfamiliar people, or where one may be scrutinized
- Individual fears they will act in a way that is humiliating or embarrassing
- Exposure to the situation produces anxiety or panic
- Person recognizes the fear as unreasonable
- Feared situations are avoided
- The avoidance, anxious anticipation, or distress must impair functioning
- Duration of at least 6 months

SPECIFIC PHOBIA

- Lifetime prevalence rates of 7.2% to 11.3%
- Ratio of women to men is 2:1
- Symptoms usually begin in childhood or early adolescence
- Predisposing factors include traumatic events, observation of others undergoing trauma or demonstrating fear, and informational exposure
- Diagnosis requires marked and persistent fear, anxiety or panic upon exposure, recognition that the fear is unreasonable, avoidance of feared situation, and functional impairment

Four Subtypes

- Animal Type
- Natural Environment Type
- Blood Injection Injury Type
- Situational Type

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SEPARATION ANXIETY DISORDER

- Prevalence rate of 4% in children and adolescents, 6% in adults
- Equally common in males and females
- Onset may develop following a life stressor
- Typically there are periods of exacerbation and remission
- Associated Symptoms: Social withdrawal, sadness, difficulty concentrating, fearfulness, anger and aggression when separation is forced, school refusal, unusual perceptual experiences, demanding behavior, in need of constant attention, intrusiveness, and somatic complaints, overbearing in relationships, overinvolved parenting
- Diagnosis requires onset before age 18 (before age 6 classified as early onset), symptom duration of at least 4 weeks in children and 6 months in adults, and three or more of the following symptoms

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SEPARATION ANXIETY DISORDER

Symptoms

- Recurrent, excessive distress when separation is anticipated
- Worry about losing, or harm befalling, attachment figures (e.g., spouse, child)
- Persistent worry that an untoward event will cause separation
- Reluctance or refusal to go to school or work
- Fear and reluctance to be alone
- Reluctance and refusal to go to sleep without being near attachment figure
- Nightmares involving themes of separation
- Somatic complaints when separation occurs or is anticipated
- Panic attacks common

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PANIC DISORDER

- Prevalence rates of 1% to 2%
- Approximately 30-50% develop agoraphobia
- Two to three times more common in women
- Age of onset between late adolescence and mid-30's (may occur in childhood)
- First degree relatives are 8 times more likely to develop panic attacks
- Prognosis at ten years: 30% are well, 40-50% are improved but symptomatic, 20-30% have symptoms that are the same or worse
- Diagnosis requires recurrent unexpected panic attacks (sudden onset of symptoms that peak within a few minutes, and is accompanied by a sense of imminent danger or impending doom)
- At least 1 month of fear of another attack
- Person may also have situationally bound attacks
- Must also have at least 4 of the following 13 somatic or cognitive symptoms

PANIC ATTACKS

- Palpitations, pounding heart, accelerated heart rate
- Sweating
- Trembling or shaking
- Shortness of breath of feeling smothered
- Choking sensation
- Chest pain or discomfort
- Nausea or abdominal distress
- Dizzy, lightheaded, or faint
- Derealization or depersonalization
- Fear of losing control or going crazy
- Fear of dying
- Numbness or tingling sensations
- Chills or hot flushes

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AGORAPHOBIA

- Typically presents between ages 20-30
- Prevalence rate 1.3%
- Fear or anxiety in 2 or more situations (e.g., public transportation, leaving home, lines)
- Fear or avoidance of those situations because of thoughts that escape might be difficult
- Fear or avoidance of those situations because help might not be available in the event of developing panic symptoms
- Immediate anxiety or panic response when exposed to the stimulus
- Symptoms present for at least 6 months

POST TRAUMATIC STRESS DISORDER

- Prevalence rate of approximately 8% in the adult population
- Symptoms can occur at any age, usually within the first three months of the trauma
- Complete recovery occurs within three months in 50% of cases
- Prolonged exposure, depression in first degree relatives, and the degree of sense of helplessness increases vulnerability
- Associated features include: impaired affect modulation; self-destructive or impulsive behavior; somatic complaints; feelings of ineffectiveness, shame, despair, or hopelessness; feeling permanently damaged; loss of previously sustained beliefs; hostility; social withdrawal; feeling constantly threatened; impaired relationships with others; a change from previous personality characteristics; survival guilt
- 4 sets of criteria (Criteria A, B, C, D)
- Symptoms must be present for 1 month for diagnosis

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POST TRAUMATIC STRESS DISORDER

Criteria A - Exposure

- Person must witness, experience, or be confronted with an event that involves actual or threatened death or serious injury, or a threat to the physical integrity of self or others
- Person's response involves intense fear, helplessness, or horror (may include disorganized or agitated behavior in children)

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POST TRAUMATIC STRESS DISORDER

Criteria B - Reexperiencing

- Recurrent and intrusive distressing recollections (may involve repetitive play)
- Recurrent distressing dreams of the event
- Acting or feeling as if the event were recurring
- (may include flashbacks, dissociation, hallucinations)
- Intense psychological distress at exposure to internal or external cues
- Physiological reactivity on exposure to internal or external cues

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POST TRAUMATIC STRESS DISORDER

Criteria C - Avoidance

- Efforts to avoid thoughts, feelings, conversations related to trauma
- Avoidance of people, places, activities that arouse memories
- Inability to recall an important aspect of the trauma
- Diminished interest or participation in significant activities
- Feeling of detachment or estrangement from others
- Restricted range of affect
- Sense of a foreshortened future

POST TRAUMATIC STRESS DISORDER

Criteria D - Arousal

- Difficulty falling or staying asleep
- Irritability or outbursts of anger
- Difficulty concentrating
- Hypervigilance
- Exaggerated startle response

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MEDICATIONS USED TO TREAT ANXIETY DISORDERS

- **SSRI's**
- **Wellbutrin**
- **Buspar/Buspirone:** Partial serotonergic agonist (5HT), blocks presynaptic and postsynaptic dopamine receptors,15-60 mg daily, effects seen in 2 – 4 weeks.
- Side effects: may cause dizziness, nervousness, nausea, headache, restlessness, or insomnia;
- **Benzodiazapines**

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BENZODIAZAPINES

- **Valium (diazepam)**: 2-20 mg
- **Ativan (lorazepam)**: 2-6 mg
- **Xanax (alprazolam):** 1-4 mg, onset in 5 min, lasts 30 min, highly addictive
- **Librium (chlordiazepoxide)**: 15-40 mg
- **Vistaril (hydroxyzine)**: 50-400 mg
- **Klonopin (clonazepam)**: 1-4 mg, onset in 1 hour, lasts 24 hours, least addictive
- **Halcion (triazolam)**: 0.125-0.5 mg

- Onset usually in 30-60 minutes, lasts 4-6 hours
- Side Effects: All have addictive potential, withdrawal symptoms, cognitive dulling, dizziness, blurred vision, slurred speech, lack of coordination, difficulty breathing

DISORDERS FOR WHICH THERE ARE NO EVIDENCE BASED MEDICATION TREATMENTS

PROPRIETARY AND CONFIDENTIAL

ASPERGER'S DISORDER

- Prevalence rates are unknown
- Five times more common in males than females
- Cognitive Impairment is uncommon
- Verbal skills usually much stronger than nonverbal skills
- Usually desire friendships but have difficulty developing them
- Associated symptoms: ADHD, depression, motor clumsiness

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ASPERGER'S DISORDER

Impaired Social Interaction

- Impaired use of nonverbal behaviors
- Failure to develop age appropriate peer relationships
- Lack of spontaneous seeking to share things with others
- Lack of social or emotional reciprocity

Restricted Behavior

- Preoccupation with stereotyped or restricted interests
- Inflexible adherence to nonfunctional rituals or routines
- Stereotyped or repetitive mannerisms
- Preoccupation with parts of an object

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AUTISTIC DISORDER

- Occurs in 5 per 10,000 individuals with rates five times higher in males than females
- Females with the disorder are more likely to have severe mental retardation
- Cognitive impairment occurs in 75% and ranges from mild to severe
- The development of cognitive skills is uneven, with poorer verbal skills
- Symptoms must be present in at least one area prior to age 3 (20% children have normal functioning for the first 1 to 2 years)
- 25% of children develop seizures
- A subset of children develop specific skills that are superior but nonfunctional
- Associated features include: ADHD, impulsivity, aggression, temper tantrums, self-injurious behavior, oversensitivity to sensory stimuli, high threshold for pain, sleeping and eating abnormalities, mood and affect disturbance, lack of fear or excessive fearfulness, and depression
- Diagnosis requires at least 6 symptoms in 3 main deficit areas

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AUTISTIC DISORDER

Impaired Social Interaction

- Nonverbal behaviors (eye contact, body posture, expressions)
- Failure to develop age appropriate peer relationships
- Lack of spontaneous seeking to share things with others
- Lack of social or emotional reciprocity

Impaired Communication

- Delay in, or total lack of, spoken language
- Inability to initiate or sustain conversation with others
- Stereotyped, repetitive, or idiosyncratic language
- Lack of make believe or social imitative play

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AUTISTIC DISORDER

Restricted Behavior

- Abnormal intensity or preoccupation with restricted interests
- Inflexible adherence to nonfunctional rules or rituals
- Stereotyped or repetitive mannerisms
- Preoccupation with parts of an object

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MEDICATIONS USED TO TREAT DEVELOPMENTAL DISORDERS

- **Antipsychotics**
- **Mood Stabilizers**
- **Stimulants**
- **Antidepressants**

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CASE STUDY

- Saul is an 18 year old male in his first year of college with a history of ADHD, Oppositional behaviors in childhood, and Dyslexia not diagnosed until high school. He struggled academically in elementary and middle school but began receiving special services in high school and was able to graduate with a 3.7 GPA. His IQ tested at 110.
- Saul did well his first semester in college. He felt confident going back for his second semester. Saul decided that he no longer wanted to take his stimulant medication since it interfered with his appetite and when he hung out in the dining hall he felt out of place, with no appetite. He was losing weight.
- Saul's grades began to slip immediately. He was missing classes, not turning in assignments, and starting to spend long periods of time getting lost inside of video games.
- Saul' s parents express concern and recommend that he see someone in the counseling center. Saul presents seeking advice.

- 1. Does Saul need therapy?
- 2. What types of interventions would you recommend for Saul?
- 3. Which medication options would you recommend?

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Questions?

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