Schizophrenia Spectrum
&
Other Psychotic Disorders

Part I 8/19/2025 1500-1000
&
Part II 8/20/2025 0800-1000
Live ZOOM

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Schizophrenia Spectrum and Other Related Psychotic Disorders

Lecture Objectives

At the end of this lecture, students should be able to:

1. **Define the term psychosis**
2. **Note the difference between a "split personality" and schizophrenia**
3. **Define schizophrenia and learn DSM-5-TR criteria of schizophrenia**
4. **Understand what is meant by the terms positive and negative symptoms of schizophrenia**
5. **Discuss differential diagnoses of schizophrenia**
6. **Address epidemiological facts of schizophrenia**
7. **Recognize co-morbid conditions noted in schizophrenia**
8. **Learn about delusions noted in schizophrenia to aid when doing a MSE**
9. **Understand how to increase medication adherence and goals of maintenance therapy**
10. **Understand rationale for aggressively treating First Episode Psychosis in schizophrenia**
11. **Understand the role of NAMI (National Alliance of the Mentally Ill)**
12. **Understand the dopamine theory of schizophrenia**

Schizophrenia Spectrum and Other Related Psychotic Disorders

Lecture Objectives (continued)

At the end of this lecture, students should be able to:

13. Understand the dopamine theory of schizophrenia
14. Understand role and history of antipsychotic medications
15. Understand the older (typical) antipsychotic medications their role, pharmacological profile and side effects.
16. Learn about depot antipsychotic medications; their advantages and disadvantages
17. Understand The GAIN Model
18. Understand rationale for using Long-Acting Injectable meds (LAIs) Depot medications
19. Understand the types and causes of medication induced neurologic movement disorders
20. Understand how an imbalance between cholinergic and dopaminergic activity causes side effects.
21. Understand about Tardive Dyskinesia and its new treatment,
22. Recognize about Neuroleptic malignant Syndrome.
23. Gain knowledge of the (newer) Atypical antipsychotics, including their side effects
24. Become familiar Clozapine and other atypical antipsychotic medications.
25. Discuss the side effects of atypical antipsychotic medications, especially Metabolic Syndrome

Schizophrenia Spectrum and Other Related Psychotic Disorders

Lecture Objectives (continued)

At the end of this lecture, students should be able to:

26. **Know how to treat antipsychotic medication-induced side effects. (EPS)**
27. **Recognize anticholinergic and antihistamine medication side effects**
28. **Understand the "Rational Use" of Antipsychotic Medications**
29. **Understand Brief Psychotic Disorder, DSM 5 criteria**
30. **Understand Schizophreniform Disorder, DSM 5 criteria**
31. **Understand Schizoaffective Disorder, DSM 5 criteria**
32. **Learn what is a Substance / Medication Induced Psychotic Disorder**
33. **Learn what is a Psychotic Disorder due to another Medical Condition**
34. **Briefly discuss other categories of psychotic disorders including Shared Psychotic Disorder**
35. **Understand what is a Delusional Disorder, its DSM-5 -TR Criteria, and types of delusions**
36. **Understand what is Catatonia and how it is treated.**

Schizophrenia Spectrum & Other Psychotic Disorders

- Topics to be covered

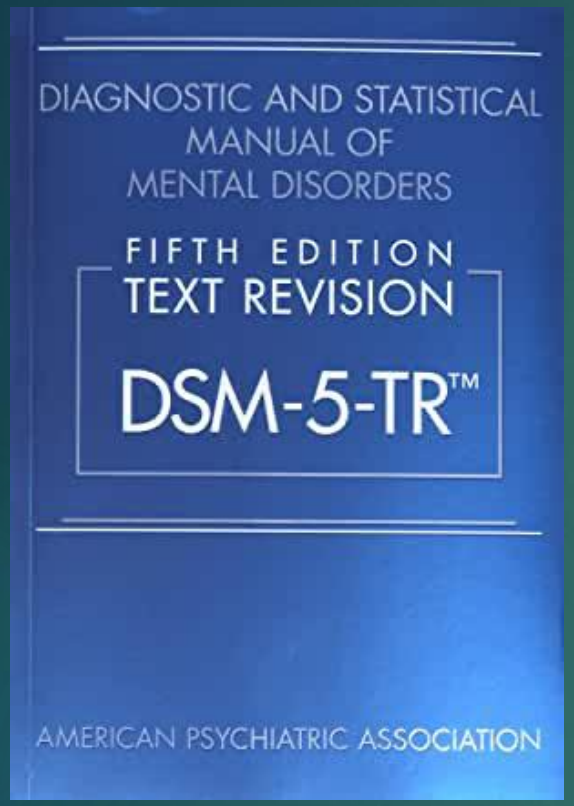
1. **Schizophrenia**
2. **Schizophreniform disorder,**
3. **Brief Psychotic Disorder,**
4. **Schizoaffective Disorder,**
5. **Delusional Disorder,**
6. **Substance/medication-induced psychotic disorder**
7. **Psychotic Disorder due to another medical condition**

Schizophrenia Spectrum & Other Psychotic Disorders

- Topics to be covered (continued)

  8. Catatonia

- h. Other Specified Schizophrenia spectrum and other psychotic disorder
- 9. Unspecified Schizophrenia spectrum and other psychotic disorder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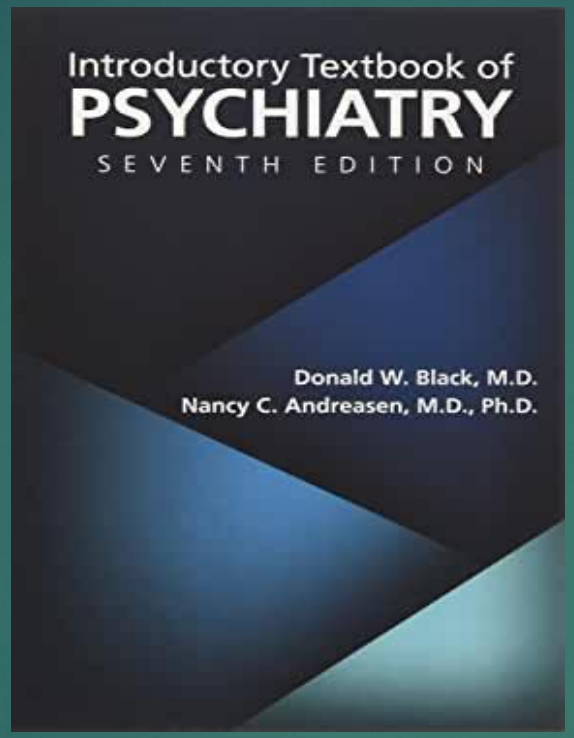
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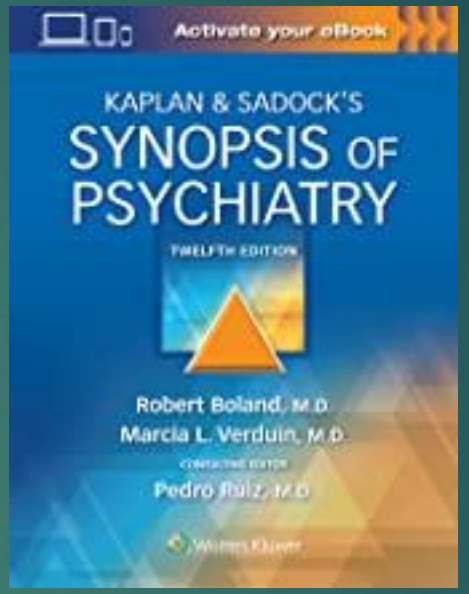
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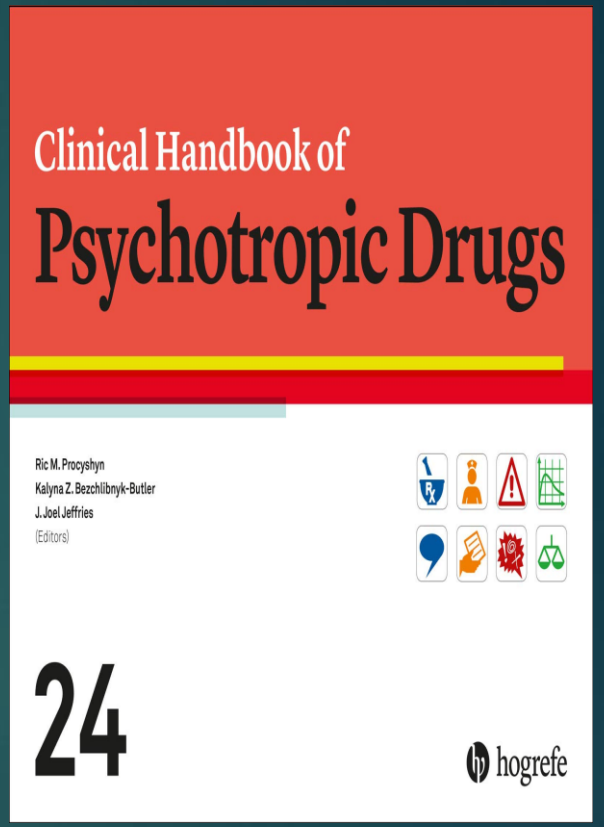
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Ric M. Procyshyn
Kalyna Z. Bezchlibnyk-Butler
J. Joel Jeffries
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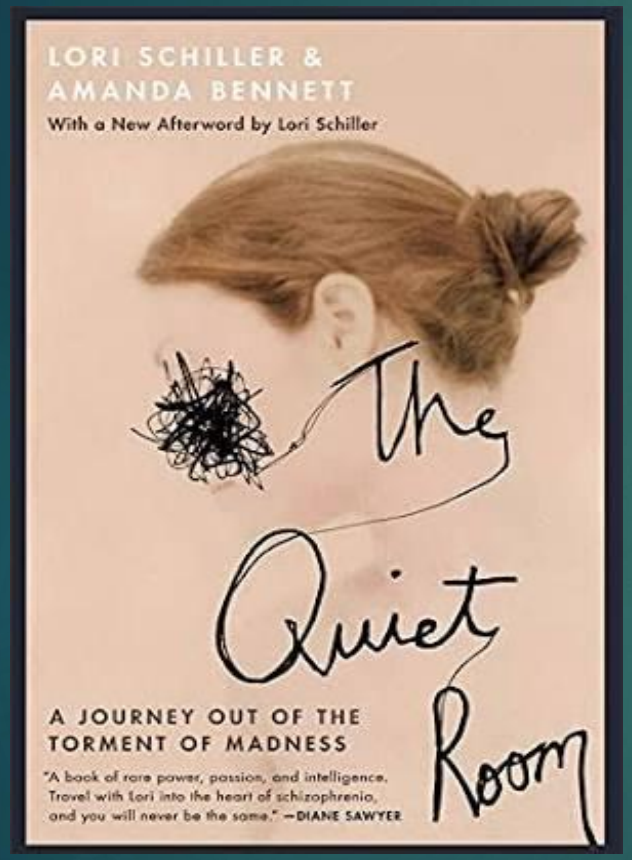
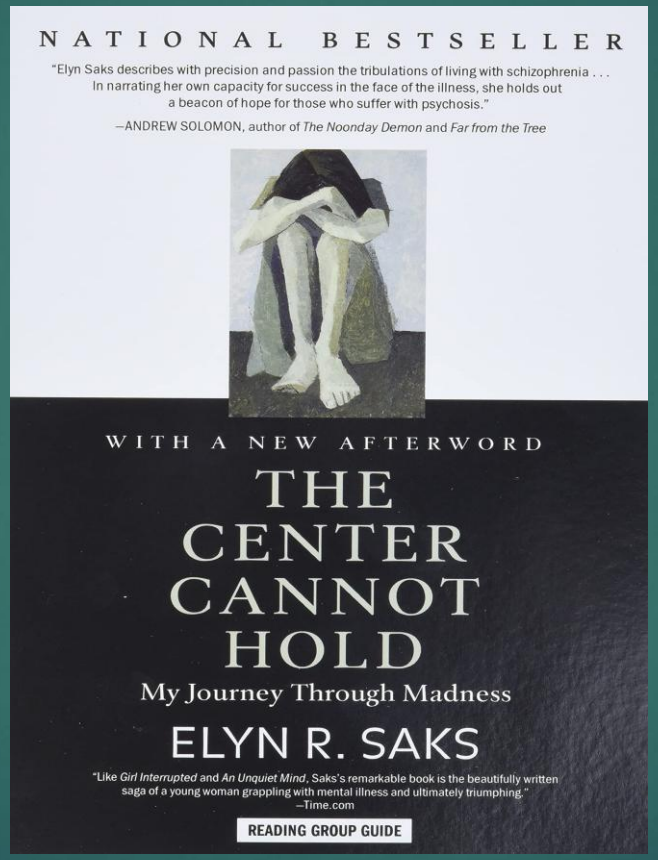
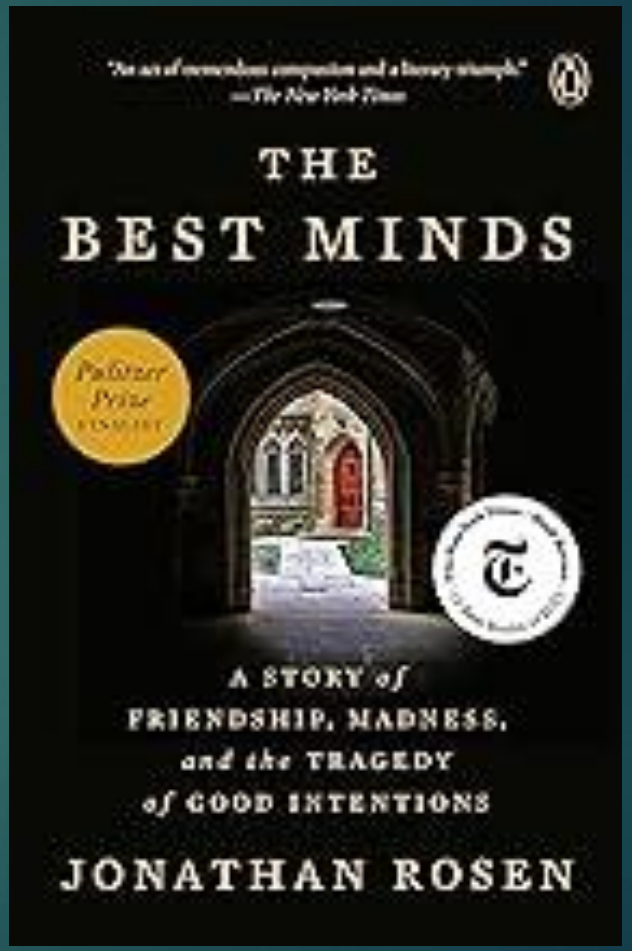
BOOKS TO CONSIDER



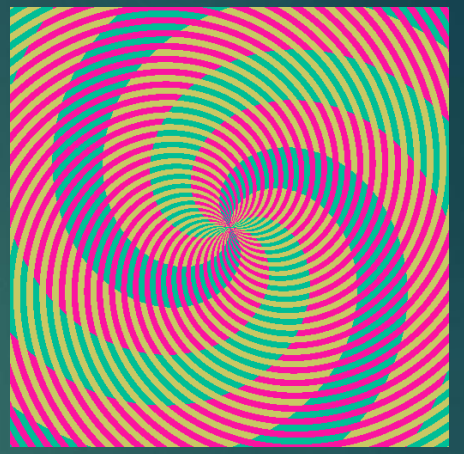




Note: This lecture and or the video(s) that accompany it contain content that may elicit uncomfortable feelings in some students.

What is Happening?

Schizophrenia



- Psychosis
  - Definition
    - Loss of or a marked impairment in reality testing

Split Personality?

This is **NOT** Schizophrenia

Schizophrenia

- **Definition:**
  - **Psychosis with a Disorder in:**
    - **Thinking**
    - **Emotions**
    - **Behavior**

Schizophrenia

DSM -5-TR:

A. **Two or more** of the following each noted during a **one month** period (At least one must be (1), (2), or)3):

1. Delusions
2. Hallucinations
3. Disorganized Speech (frequent derailment or incoherence)
4. Grossly Disorganized or Catatonic Behavior
5. Negative Symptoms (i.e., diminished emotional expression or avolition)

Schizophrenia

- **DSM -5TR**
  - **B. Social/Occupational Dysfunction**
    - Clear drop off in:
      - Interpersonal relationships
      - Job Skills
      - Self Care

Schizophrenia

DSM -5-TR

C. **Duration**

Continuous **> 6 MONTHS!!!!!!!!**

"A" Symptoms **> 1 MONTH**

D. Excludes Mood or Schizoaffective Disorder

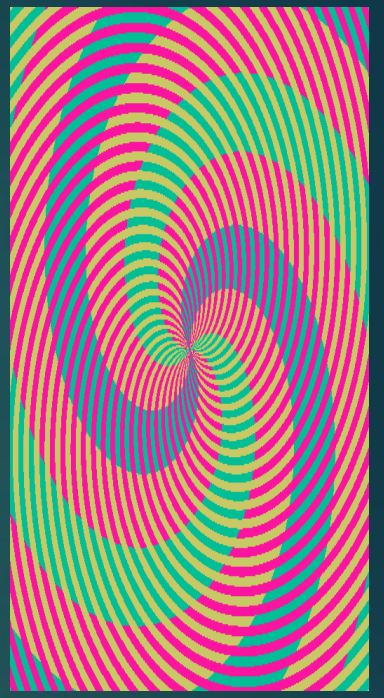
E. Excludes substance or medical condition

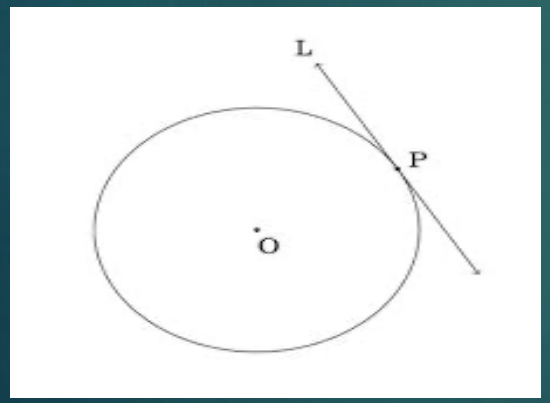
Schizophrenia

- **NOTE:**
  - Psychotic Symptoms of Schizophrenia occur:
    - In absence of change in level of consciousness
      - **Rules out Delirium**
    - Or in the absence of significant cognitive disturbance
      - **Rules out Dementia**
    - Or a primary mood change
      - **Rules out Depression/Mania**

Schizophrenia

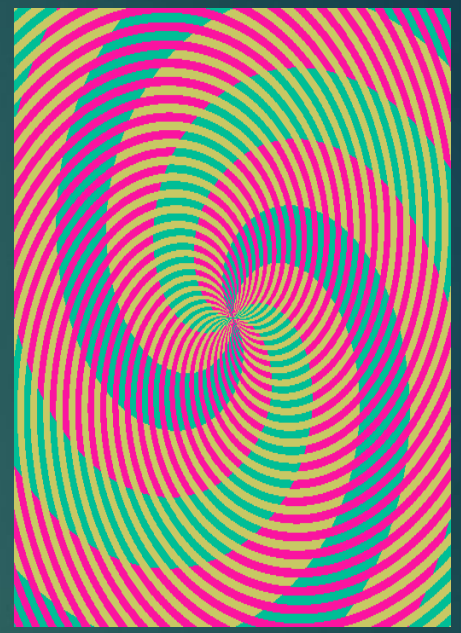
- Positive Symptoms (Add-Ons)
  - Hallucinations
    - Auditory
    - Visual
  - Disordered Speech (thought disorder)
    - Loose associations (derailment)
    - Tangentiality
    - pressure of speech





Schizophrenia

- Positive Symptoms (Add-Ons)
  - Delusions
    - Persecutory
    - Grandiose
    - Religious
    - Ideas of reference
    - Thoughts of being controlled
    - Thought insertion
    - Thought broadcasting
  - Catatonic Behavior



Schizophrenia

- Negative Symptoms (Take Aways)
  - Impoverished Thinking
  - Blunted, Flat Affect
  - Intellect Impaired
  - Social Withdrawal
  - Poor Hygiene/Grooming
  - Loss of Motivation
  - Loss of Initiative
  - Deficit in Insight

Schizophrenia

- Negative Symptoms (Take Aways)
  - I. Affective Flattening or blunting
    - Unchanging facial expression
    - Decreased spontaneous movement
    - Paucity of expressive gestures
    - Poor eye contact
    - Affective non-responsivity
    - Inappropriate affect
    - Lack of vocal inflections

Schizophrenia

- Negative Symptoms (Take Aways)
  - II. Alogia
    - Poverty of Speech
    - Poverty of the content of one's speech
    - Blocking
    - Increased latency of response

Schizophrenia

- Negative Symptoms (Take Aways)
  - III. Anhedonia-asociality
    - Recreational Interests and activities
    - Sexual interest and activities
    - Intimacy and closeness
    - Relationships with friends

Schizophrenia

- Negative Symptoms (Take Aways)
  - IV. Attention
    - Social inattentiveness
    - Inattentiveness during testing

Schizophrenia

- Negative Symptoms (Take Aways)
  - V. Avolition-apathy
    - Impaired grooming and hygiene
    - Lack of persistence at work or school
    - physical anergia (lethargy and low energy)

Schizophrenia

- **Medical Differential Diagnosis**
  - Delirium
  - Dementia
  - Drug Induced Psychosis
  - Deficiency States
  - Metabolic
  - Alcohol Related
  - Neurologic
  - Endocrinologic

Schizophrenia Epidemiology

- **Prevalence**
  - 1-2% (More recent studies seem to indicate it may be <1%)
  - 2,000,000 Affected in the U.S.
  - Globally 5th leading cause of disability for men
  - Globally 6th leading cause of disability for women
  - Worldwide is in top 25 causes for disability
  - In US 15-45% homeless if diagnosed with schizophrenia
- **Sex Ratio**
  - Male > Female (1.4/1.0) For long time was 1;1

Schizophrenia Epidemiology

- **Epidemiology**
  - **Region: Urban > Rural**

Schizophrenia Epidemiology

- Cost:
  - Estimated 2% GNP
  - More than cost to treat all cancers combined

- Hospitalizations
  - Shorter hospital stays since the 1950s..why?
  - 50% are readmitted in 2 years

Features associated with good and poor prognosis in schizophrenia

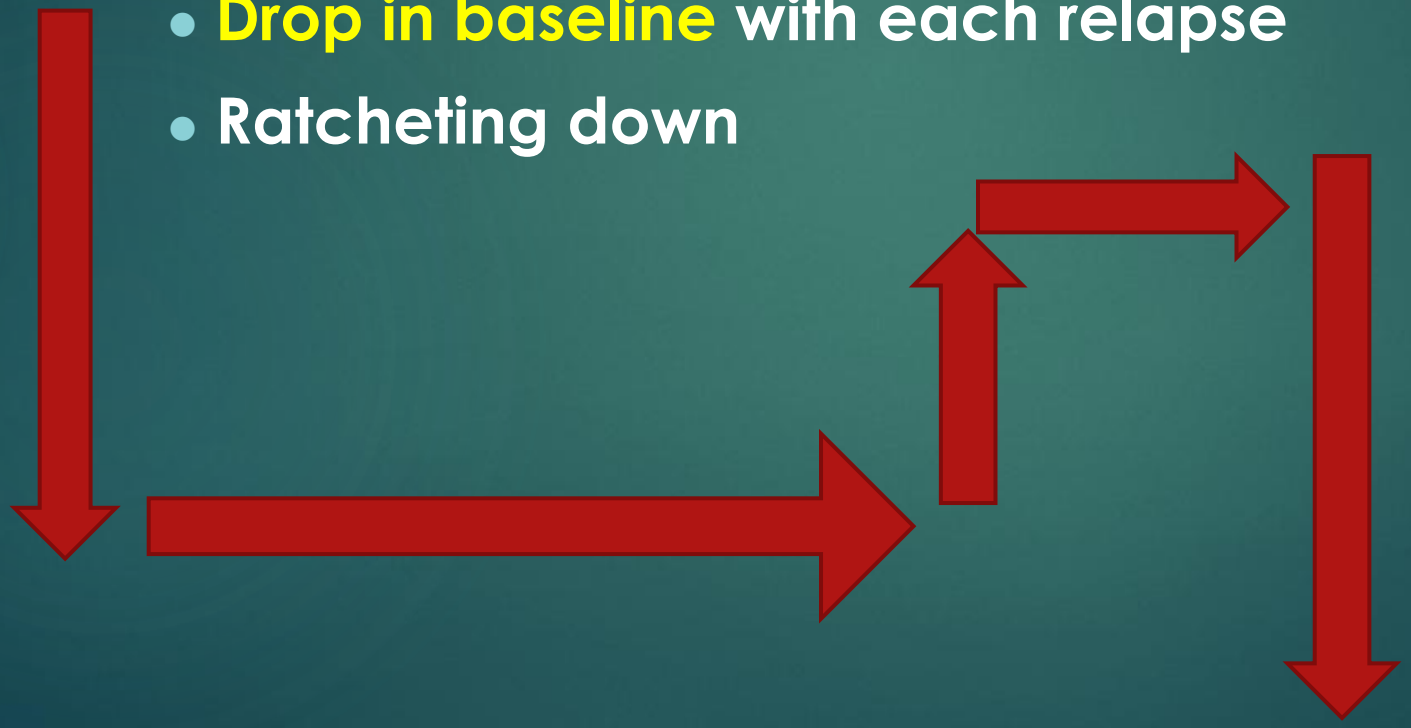
Feature	Good outcome	Poor Outcome
1. Onset	1. Acute	1. Insidious
2. Duration of prodrome	2. Short	2. Since childhood
3. Age at onset	3. Late 20s to 30s	3. Early teens
4. Mood symptoms	4. Present	4. Absent
5. Psychotic or negative symptoms	5. Mild to Moderate	5. Severe
6. Obsessions/compulsions	6. Absent	6. Present
7. Gender	7. Female	7. Male
8. Premorbid functioning	8. Good	8. Poor
9. Marital status	9. Married	9. Never married
10.Neurological functioning	10.Normal	10.+ Soft signs
11.Structural brain abnormalities	11.None	11.Present
12.Intelligence level	12.High	12.Low
13.Family history of schizophrenia	13.Negative	13.Positive

Schizophrenia Epidemiology

- **Onset**
  - **Males:** 15 -25 Years
  - **Females:** 25 -35 Years
    - Rare before 10
    - Rare after 50 (very rare)
- **Relapse rates**:
  - **20%** even if taking meds faithfully
  - **70%** relapse in 1 year if not taking meds
- **Non-Compliance Rates**
  - **40% not taking** their **meds** as prescribed **by 6 months**

Schizophrenia Epidemiology

- **Chronicity:**
  - Residual Symptoms develop after several years or episodes
    - **Drop in baseline** with each relapse
    - Ratcheting down



Goal is to prevent this from happening

Schizophrenia Epidemiology: Course Of Illness

- **Prodromal Phase**
  - May Precede illness by years
  - Social withdrawal (Negative Symptoms)
  - Subtle Emotional Changes
  - Family minimizes or rationalizes changes
- **Active Phase**
  - Hallucinations and delusions
  - Treatment sought ...typically taken to Emergency Room
- **Residual Phase**
  - Psychotic Symptoms if present are attenuated
  - May have periods of exacerbations

Schizophrenia Epidemiology

- Difficult to treat:
  - 20-30 % Respond poorly or not at all to currently available medications

Epidemiology: Prevalence in Family Members (Genetics)

- General Population 1 %
- Non-Twin SIB of Sz Patient 10 %
- Child of 1 Sz Parent 5-6 %
- Dizygotic twin of Sz Patient 14 %
- One Sz sibling and 1Sz parent 17%
- Child of 2 Sz Parents 46%
- Monozygotic twin of Sz Patient 47%

Epidemiology: Mortality & Morbidity

A. Increased mortality:
- Those with schizophrenia lose 13–15 years of potential life,
- Life expectancy is about 60 years for men and 68 years for women.
- These values seemed not to have improved over time.

B. Suicide: is greatest risk for premature death.
- 20-50% will attempt suicide
- Approximately 10-13% are successful
- 2/3 have seen their doctor within 72 hours of death.

C. Health Care: Do not usually get needed health care:
- About 80 % of patients have significant concurrent medical illnesses
- ≥50% may be undiagnosed
- Increased risk of diabetes even before beginning use of antipsychotics
- Cardiovascular problems

Homicide Risk
- No Greater than General Population

Epidemiology: Schizophrenia Prognosis

- 10-20% Good Outcome 5-10 Years after first break
- >50% Poor outcome, with repeat hospitalizations
- 40-60% are significantly impaired entire life
  - Mood disorders(20-25% significantly impaired)

Schizophrenia

- Co-morbidity with schizophrenia
  - Substance abuse
    - 50% lifetime prevalence rate
      - Alcohol: 48%
      - Marijuana 23%
      - Cocaine 19%
    - Associated with:
      - Earlier age of onset; (18vs 25 yrs.)
      - Worse clinical outcome (poor adherence to treatment)
      - Often drugs used to: lift mood, increase motivation, or decrease side effects of medications.

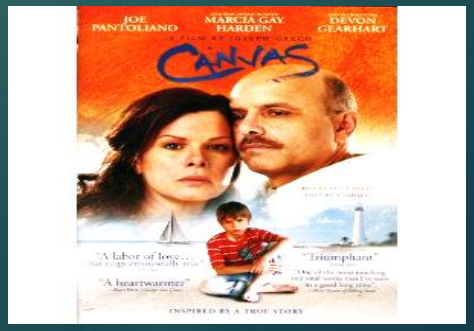
Schizophrenia

- Co-morbidity with schizophrenia
  - **Cigarette Smoking**
    - **62% of individuals with schizophrenia,**
    - **37% with bipolar disorder, and**
    - **17% of those without a psychiatric disorder reported that they were current smokers**

Time for Videos

Schizophrenia

- This 2006 movie received a Substance Abuse and Mental Health Services Administration (SAMHSA) award for its accurate portrayal of mental illness.
- "Canvas is an accurate and sympathetic portrayal of a woman with schizophrenia and the effects her illness has on her son and husband. She decompensates into a state of agitation, and paranoia and requires an involuntary hospitalization after being taken from her home by the police. It received praise for its sensitive handling of psychotic symptoms and family adjustments which are significant and continuous. This movie has an optimistic ending."
  - (David Robinson, MD (Reel to Reel 2009)



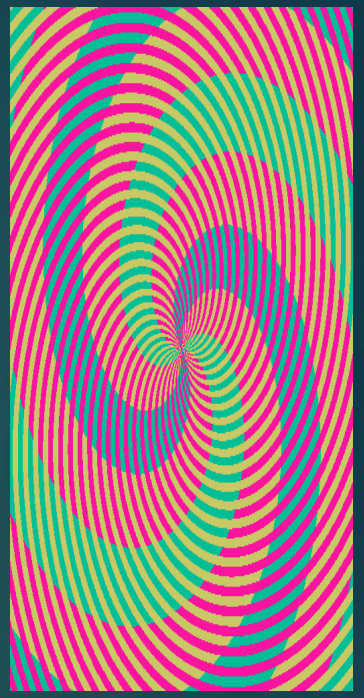
"Schizophrenia Mental Status Examination"

- Thought Content Disorders
  - Delusions
    - Paranoid (Persecutory): Being followed, Phone tapped, FBI after them.
      - Referential Thinking

        TV/Radio Talking About Them or Influencing Their Behavior
      - Thought Broadcasting

        Feel that other people can hear their inner thoughts
      - Thought Insertion

        Ex: Alien thoughts are being put into one's mind



"Schizophrenia Mental Status Examination"

- **Delusions (Continued)**
  - **Grandiose Delusions**

    Possess Special Powers

    They are Jesus, President of US, Governor of CA
  - **Somatic Delusions:** Believe one's organs stopped functioning (e.g., "my brain and heart have stopped working".
  - **Nihilistic:** Believing one is dead or world does not exist
  - **Sexual:** Believe one is a prostitute, pedophile, rapist or masturbation has led to illness or insanity, or your sexual behavior is commonly known.
  - **Religious**: Believe one has sinned against God, has special relationship to God or some other deity, are the devil or condemned to burn in hell.

Try to answer the following:

1. At about what age did his illness begin?
   - Is this typical for this illness?
2. How did he do in high school?
3. Has he been taking his meds faithfully?
4. Would you try a different medication?
5. What are risks of taking Haloperidol?
6. Does he have a delusion?
7. What type(s) of hallucinations does he have?
8. The voices told him to steal.
   - What is this called?
9. Does he have a bipolar illness?
10. Has he ever had a job?
11. Did any family members have a psychiatric disorder?

"Greg" DSM 3 #1.1

"3 men with beards are following me"

~6 min

1. Do you have difficulty following his thought pattern
2. What is the word “detoned” an example of?
3. Does he exhibit tangential thinking?
4. Does he have a thought disorder?
5. Does he exhibit circumstantial thinking?

Video

Andreasen Video

2.1

An example of a *severe thought disorder*

Treatment

Antipsychotic Medications

Schizophrenia First Episode Psychosis

- High rate of self harm and suicide: So need to TREAT EARLY
- These patients have a high rate of recovery
- These patients often experience high rates of side effects
- Most will not want to be treated on inpatient unit with patients who have not recovered.
- Sometimes it is hard to diagnose these patients especially if using illicit drugs, such as cannabis and or meth, etc.

Schizophrenia First Episode Psychosis

- **Medication issues:**
  - Start with a second generation antipsychotic (SGA)
  - Typically begin with a SGA with a reduced metabolic risk.
    - Thus Olanzapine and Quetiapine are not typically first choices.
    - Start with a low dose.
    - If one medication is poorly tolerated, try another
  - Many patients will do better on long-acting medications. (Depot)
  - 60-80 % of patents will respond well to medications in first episode.
  - If patient does not do well, on 2 different medication trials, consider Clozapine early. Do not wait months and months
  - Not having a remission in first 3 months of treatment was predictor of a bad long-term outcome.
  - Always monitor for side effects, to increase chances of compliance

Schizophrenia First Episode Psychosis

- **Non-adherence** :
  - Note: for First Episode Patients (FEP), about 50% have significant non-adherence in first year and up to 75% in second year.
  - This leads to relapse, leading to not being able to work, increased hospitalizations.
  - For first episode patients that have only a partial response, it is vital to continue to try alternate doses and treatment to get full remission.
  - Develop good rapport.
  - Avoid Intermittent Med Administration:
    - Recent study: Intermittent administration of antipsychotic medications leads to far greater number of illness exacerbations.

Schizophrenia First Episode Psychosis

- **Importance of early Team Intervention programs :**
  - Clear evidence of improved outcomes…many more able to return to work or school
  - These programs include :
    - use of medications
    - family psychoeducation and
    - programs to support education and work.

Schizophrenia

- **Long term Treatment**
- **Goal**: Control of Psychotic Symptoms
  - Length of Treatment after initial psychotic episode:
    - ≥ 1-2 years of treatment (Try to minimize relapse and social deterioration thru use of LAIs)
    - ≥ 5 years of treatment for multiple episodes
    - For those who achieve remission it remains unclear if they truly need to stay on meds forever.
    - Studies show as many as 30% of patients will achieve remission and do well on low dose or no medications
    - **Key** is to treat with lowest dose of antipsychotic medication possible and closely monitor patients and consider supplemental medications is if they become worse
    - **Consider depot medications early if non-compliant or prefer injections to oral medications**
    - **Likely a large percentage of patients will need lifelong treatment!!**

Psychopharmacology

Depot Neuroleptics (continued)

Reasons why LAIs are not widely used in Early-Phase Schizophrenia.

- Clinician overestimation of patient's degree of adherence
- Bias against injections as being invasive
- Thought that talking about LAIs would take a lot of time
- Belief that suggesting the Lai wound mean the patient is not trusted and thus would disrupt the therapeutic alliance
- Insufficient involvement of family and peer counselors
- Lack of appreciation of advantages of LAIs for patients, family, and healthcare providers in the context of guidelines that relegate LAIs to a last resort approach.

Psychopharmacology

Depot Neuroleptics (continued)

Reasons why LAIs are not widely used in Early-Phase Schizophrenia. (continued)

- in the context of guidelines that relegate LAIs to a last resort approach.
- Lack of training in using LAIs and best way to switch administration, dose adjustments and managing adverse events (AEs)
- Lak of adequate training in shared decision making approaches and antiplacating/answering frequently asked questions
- Lack of discussion and or implementation of LAIs by referring inpatient units.
- Belief that LAIs are inappropriate for early-phase schizophrenia patients who have not clearly demonstrated patterns of nonadherence leading to relapse.

Psychopharmacology
The GAIN MODEL

Goal Setting: Discover patient's life goals

Discuss current treatment satisfaction

Listen actively

Develop small concrete attainable steps to achieve goals

Be willing to compromise where feasible

Action Planning: Explore +/- of once monthly tx

Listen to any patient fears/concerns

Describe link between use of LAIs and achieving long-term goals

Elicit support of family/caregivers

Psychopharmacology

The GAIN MODEL

Initiate treatment: Step by step discussion of treatment process, including use of oral meds if needed.

Listen carefully for negative perceptions of injections and normalize

Elicit feedback from patient on satisfaction with the treatment.

Nurturing Change: Explore any side effects or negative experiences and assure the patient their concerns will be addressed

Celebrate positive experiences, i.e., reduced symptoms/relapses

Identify additional aspects of treatment plans (e.g., employment, education) that may help the patient attain their goals

Reassess goals

Psychopharmacology

Depot Neuroleptics (continued)

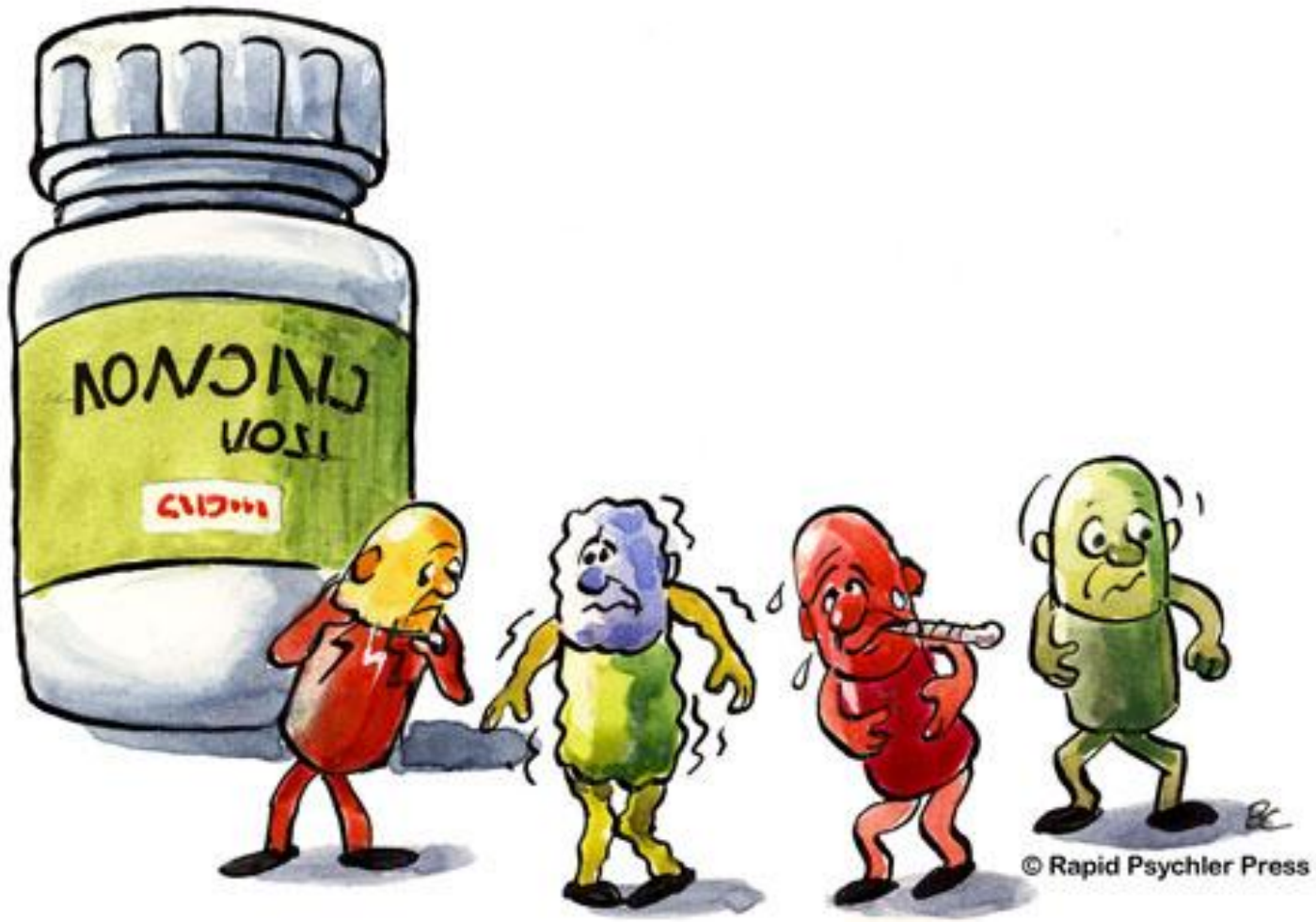
The Treatment Model

- ✓ Rather than ask why we should use LAIS we should ask <u>why not</u>?
- ✓ Delivery of the message is key—GAIN Model
- ✓ Must put emphasis on positive reasons:
  - ✓ Convenience
  - ✓ Supportive of patient's goals
- ✓ Enlist family and significant other's support

Schizophrenia

- **National Alliance for the Mentally Ill (NAMI)**
  - Comprised entirely of family members
    - Very productive/useful organization

Medication-Induced Movement Disorders



Psychopharmacology

- **Neurologic Side Effects**
  - Extrapyramidal Symptoms (EPS)
    - **Acute Dystonic Reaction** (2%)
      - Involuntary Muscle Spasm
      - Early Symptom
      - **Laryngeal dystonia**! (Life threatening)
    - **Parkinsonian Symptoms** (20%)
      - Tremor (Pill Rolling)
      - Cogwheeling (Rigidity)
      - Bradykinesia. (Note: festinating gate in PD)
      - Tremor at Rest
    - **Akathisia** (20%)
      - "Ants in Pants" (Do not be fooled into increasing meds)

Dystonia

Opisthotonos

Psychopharmacology

- Neurologic Side Effects (continued)
  - Tardive Dyskinesia (20%, 8% Persist)
    - Abnormal Involuntary Movements
      - Face
      - Mouth
      - Trunk
    - May be Permanent
    - Abnormal Involuntary Movement Scale (AIMS)
    - Video (time permitting) https://youtu.be/_dnK578aZdo

Psychopharmacology

- **Neurologic Side Effects (continued)**
  - **Tardive Dyskinesia** (20%, 8% Persist)
    - **Affects older > younger**
    - **Affect women > men**
    - **Increased risk with > 3 months of treatment**
    - Increased risk of TD among patients with schizophrenia or other chronic mental illnesses
    - TD incidence rates of approx. 3% with SGAs compared with 8% with FGAs in adults
    - The cumulative incidence of TD increases in a linear fashion with duration of exposure, such that long-term risk is 68% after 25 years of use
    - A good medication history is vital to making an accurate diagnosis of TD

Psychopharmacology

- **Neurologic Side Effects (continued)**
  - **Tardive Dyskinesia**
  - A logical treatment approach
    - 1. Try to cut down on medications
    - 2. Then try to stop meds
    - 3. Then if on FGA switch to SGA
    - 4. If already on SGA try to cut down then try to switch to alternative drug i.e., clozapine
    - Eliminate anticholinergic medications if possible
    - Try VMAT2 drugs
      - Are effective in bringing about some patient improvement.

Psychopharmacology

- **Neurologic Side Effects (continued)**

  New FDA approved treatments for tardive Dyskinesia

  1. **Valbenazine (Ingrezza)** (4/17)
     - Vesicular monoamine transporter (VMAT2) Inhibitor
     - Price: $6,252 for thirty 40mg capsules and $7,038 for thirty 80mg capsules. (~75,000-85,000/year)

  2. **Deutetrabenazine (Austedo)** **(8/17)**
     - **Originally for treatment of Huntington's Chorea**

Small issue: Was $10,000+ for a 30 day supply Price Drop 2500/month = $30,000/year

Psychopharmacology

- **Neurologic Side Effects (continued)**
  - **Neuroleptic Malignant Syndrome (NMS)**
    - life threatening neurologic emergency (10 – 20% die)
      - associated with use of neuroleptic agents and
      - clinical syndrome of
        - A. **mental status change** first symptom in 82% of cases (often delirium),
        - B. **Rigidity of muscles** (lead pipe or cog-wheeling),
        - C. Fever **(104-106) and**
        - D. Autonomic instability
          - tachycardia (88%),
          - labile or high blood pressure (61-77 %), and tachypnea (73 %)
          - Dysrhythmias and diaphoresis may also occur

Psychopharmacology

- **Neurologic Side Effects (continued)**
  - **Neuroleptic Malignant Syndrome (NMS) (continued)**
    - Other points worth noting
      - Elevated CPK (CK) **1000 IU/L and can be as high as 100,000** IU
        - Normal: **22 to 198**
      - These patients belong in the ICU!!
      - Greater incidence with FGA than SGA
      - Can occur any time but usually within first 2 weeks of treatment
      - May occur with anti-emetics (weak D2 blockers)
        - i.e., (eg, metoclopramide (Reglan) , promethazine (Phenergan) , prochlorperazine (Compazine) , domperidone (Motilium) and droperidol (Inapsine))

Psychopharmacology

- *ATYPICALS* (Newer Antipsychotics)
  - 1. Clozapine:
    - High in its anticholinergic activity (extremely constipating)
    - Highly Antihistaminic --- Sedating (40%) for about 6 weeks
    - May cause Seizures (1-5%) Dose related
    - May cause Hypotension
    - May cause Delirium: > in elderly, likely anticholinergic activity
    - May cause Weight gain
    - May cause Severe Constipation (14%) (stool softener/ laxatives)
    - May cause Agranulocytosis (<3500 WBC) 1-2%
      - 0-6 months: weekly then 6mos-12 months: Q 14 days, then Q month
      - Approximately 4% with agranulocytosis will die.
      - Those who developed agranulocytosis, if rechallenged will develop it again.

Psychopharmacology

- *ATYPICALS* (Newer Antipsychotics)
  - 1. Clozapine * (continued):
    - Minimizes Chance Of Tardive Dyskinesia
    - Low EPS
    - Effective For Negative Symptoms
    - Weak D2 Antagonist
      - 10 Times more Affinity @ D4 than D2
    - Metabolic Syndrome
    - Typically utilized after failure with 2 prior SGAs
      - Best drug treatment for resistant schizophrenia
    - Appears to reduce suicide risk for schizophrenic patients

Psychopharmacology

- *A new Drug Class (Approved 9/2024)*
  - 1. Cobenfy (xanomeline + Trospium Chloride)
    - Xanomeline: Targets muscarinic acetyhlchioline receptors (M1, M4 agonist)
    - Regulates presnynaoptic syunthesis of dopamine in ventral tegmental asrea of the brain.
      - This area is considered more central to the cogntive and behavioral aspects of schizophrenia
      - Decreases dopamine release instead of blocking the post-synaptic receptor
      - Some see it used an add-on to other psychotropic medications in patents who are treatment resistant . Not yet compared to clozapine but both have GI issues so this may not work in combination.
    - Tropsium Chloride: Antagonizes the Muscarinic receptors primarily in the peripheral tissues thus decreasing side effects in the peripheral tissues.
    - Side effects:
      - Mainly GI: nausea vomiting indigestion constipation abdominal pain and GE Reflux.
      - GU: Urinary retention in elderly

OTHER TREATMENTS

ECT

Psychopharmacology

- **Treatment of Medication Induced EPS**
  - Anticholinergic Medications
    - **Benztropine** (Cogentin)
    - **Trihexyphenidyl** (Artane)
  - **Amantadine** (Symmetrel)
    - Blocks Cholinergic Receptors
    - Increases Dopaminergic Transmission in CNS
    - **Used in Parkinson's Disease**
    - Originally used **in flu treatment**

Psychopharmacology

- **Anticholinergic Side Effects**
  - Blurred Vision
  - Constipation
  - Delirium
  - Urinary Retention
  - Decreased Sweating (hyperthermia)
  - Decreased Salivation

Psychopharmacology

- **Antihistamines**
  - Antagonism of D2 Receptors
  - Mild Anticholinergic Effects
- Examples:
  - 1. Diphenhydramine (Benadryl)
  - 2. Hydroxyzine (Atarax, Vistaril),
- Antihistamine Side Effects
    - Sedation
    - Dizziness
    - Hypotension
    - Paradoxical Excitement
    - Increased risk in Elderly even at low dose

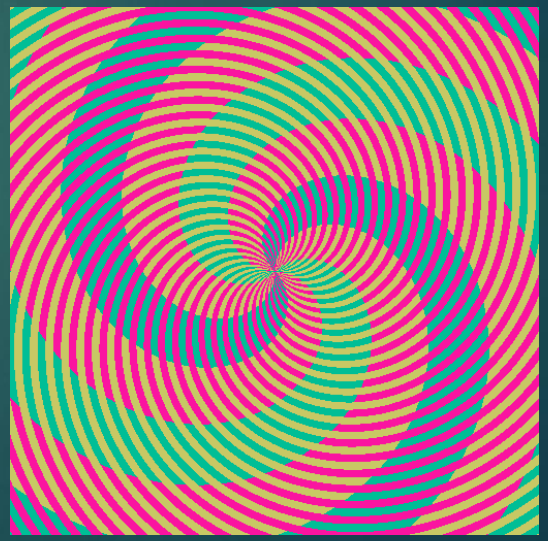
Psychopharmacology

- **Rational Use of Antipsychotics**

1. Hi potency FGA or a SGA should be first line treatment
   - SGAs are effective and well tolerated and have less potential for inducing EPS
2. Drug trial should last 4-6 weeks
   - Consider Aripiprazole, Ziprasidone, or lurasidone for those at risk of weight gain
   - Quetiapine or Aripiprazole should be considered if low EPS or prolactin levels are desired.
3. Start all antipsychotics at a low dose and gradually increase to a therapeutic range
4. Little reason to prescribe >1 antipsychotic agent
   - Two or more agents increases adverse effects and adds little clinical benefit.

Psychopharmacology

- **Rational Use of Antipsychotics** (continued)
  5. Clozapine should be reserved for treatment refractory illness due to:
     - Risk of agranulocytosis
     - Blood monitoring of white cell counts
  6. SGAs are effective and well tolerated and have lees potential for inducing EPS
  7. Many patients can benefit from chronic antipsychotic administration
     - Be alert for Metabolic Syndrome
       - Weight gain
       - Glucose dyscontrol
       - Lipid abnormalities
       - Elevated blood pressure



Abnormal Involuntary Movement Scale (AIMS)

Instructions: Complete the examination procedure before making ratings. Circle score for each item.

Patient Name:	Date:	None	Minimal, may be extreme normal	Mild	Moderate	Severe
Facial and Oral Movements						
1. Muscles of Facial Expression e.g., movements of forehead, eyebrows, periorbital area, cheeks; Include frowning, blinking, smiling, grimacing		0	1	2	3	4
2. Lips and Perioral Area e.g., puckering, pouting, smacking		0	1	2	3	4
3. Jaw e.g., biting, clenching, chewing, mouth opening, lateral movement		0	1	2	3	4
4. Tongue Rate only increases in movement both in and out of mouth, NOT inability to sustain movement		0	1	2	3	4
Extremity Movements						
5. Upper (arms, wrists, hands, fingers) Include choreic movements (i.e., rapid, objectively purposeless, irregular, spontaneous); athetoid movements (i.e., slow, irregular, complex, serpentine). DO NOT include tremor (i.e., repetitive, regular, rhythmic).		0	1	2	3	4
6. Lower (legs, knees, ankles, toes) e.g., lateral knee movement, foot tapping, heel dropping, foot squirming, inversion and eversion of foot		0	1	2	3	4
Trunk Movements						
7. Neck, shoulders, hips e.g., rocking, twisting, squirming, pelvic gyrations		0	1	2	3	4
Global Judgments						
8. Severity of abnormal movements		0	1	2	3	4
9. Incapacitation due to abnormal movements		0	1	2	3	4
10. Patient's awareness of abnormal movements (rate only patient's report) 0 = not aware; 1 = aware, no distress; 2 = aware, mild distress; 3 = aware, moderate distress; 4 = aware, severe distress		0	1	2	3	4
Dental Status						
11. Current problems with teeth and/or dentures?		No	Yes			

Tardive Dyskinesia VIDEO

https://youtu.be/W_3bbpFjI68?si=KDHurHfhTP5WxJ5p

6:45

1:44

Other Psychotic Disorders

Brief Psychotic Disorder

- DSM -5-TR Criteria

- A. ≥ 1 symptoms (One must be 1, 2, or 3)
  - 1. Delusions
  - 2. Hallucinations
  - 3. Disorganized Speech
  - 4. Markedly disorganized or catatonic behavior
- B .Episode lasts > 1 day but < 1 month
  - Patient will return to premorbid level of functioning
    - This diagnosis is actually rare.
- C. Not due to Schizoaffective or mood disorder
- D. Not due to Medical Cause or substance use.
  - Wise to assess for medical issue or drug use.

Brief Psychotic Disorder

- Additional Information
  - 1. May be due to marked or without marked stressors.
  - 2. Can be noted with postpartum onset (post partum psychosis)
    - Symptoms usually develop during pregnancy or within 4 weeks of a delivery.
      - Most have symptoms (psychosis) that resolve in 2-3 months
      - Note: Postpartum blues seen in 80% new mothers lasts usually only a few days and is considered normal.
  - 3. Prevalence (9%) new-onset psychoses
  - 4. Some may need hospitalization for own or safety of others

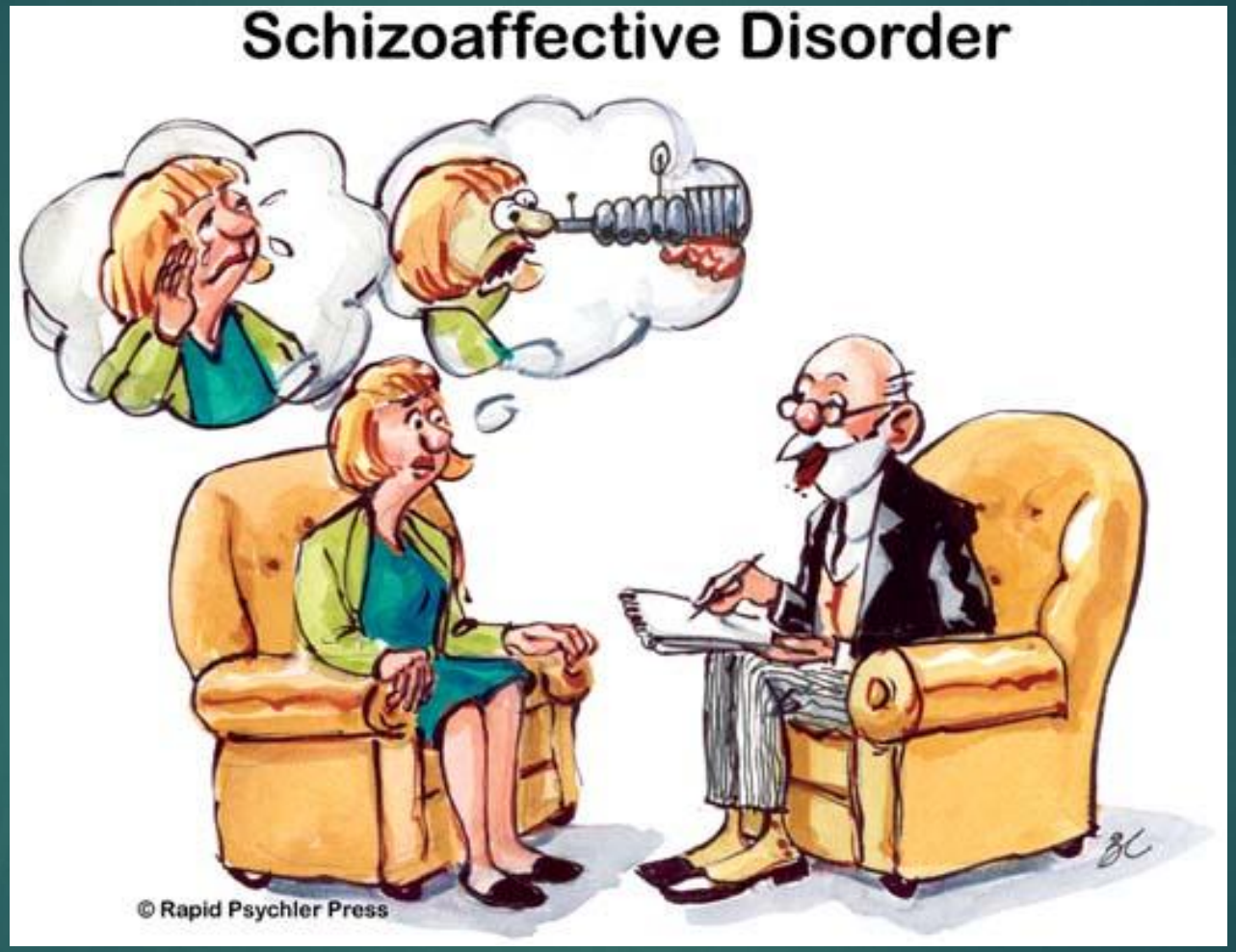
Schizophreniform Disorder

- DSM -5 Criteria
  - A. ≥ 2 symptoms present for month (One must be 1, 2, or 3)
    - 1. Delusions
    - 2. Hallucinations
    - 3. Disorganized Speech
    - 4. Markedly disorganized or catatonic behavior
    - 5. Presence of Negative symptoms
  - B .Episode lasts > 1 Month but < 6 months **(>1<6)**
    - 60-80% will later develop schizophrenia
    - Some have additional episodes of schizophreniform disorder
    - Very few have just one episode
  - C. Not due to Schizoaffective or mood disorder
  - D. Not due to Medical Cause or substance use.

Schizoaffective Disorder

- **DSM -5**
- A. Uninterrupted period of illness during which there is a major mood episode (depressive or manic) concurrent with criterion "A" of Schizophrenia
- B. Delusions or hallucinations ≥ 2 weeks in absence of major mood episode (depressive or manic) during lifetime duration of illness. **(This is KEY element in making diagnosis!)**
- C. **Symptoms** meet criteria for major **mood disorder present for majority** of the illness
- D. Not Due to Medical Problem or Substance use.

- Specify if either Bipolar or Depressive type


Schizoaffective Disorder
© Rapid Psychler Press

Schizoaffective Disorder

Major Mood Disorder + **Schizophrenic Symptoms** = **Schizoaffective Disorder**

Also, >2 weeks No MMD + **Schizophrenic Symptoms**

Substance / Medication-Induced Psychotic Disorder

- DSM -5 Criteria:
- A. Presence of 1 or more of the following symptoms:
- 1. Hallucinations
- 2. Delusions
- B. Evidence from H&P, P.E. or lab tests of <u>both</u> (1) and (2)
  - 1. Symptoms in Criterion A developed soon or after substance intoxication or after exposure to a medication
  - 2. The substance/medication can produce symptoms in Criterion A.
- C. Not better explained by a psychotic disorder that is not substance/medication induced
- D. <u>The disturbance does NOT occur exclusively during the course of a delirium</u>
- E. Marked distress and or impaired social, occupational function

Video Eddie
DSM 4
1.2
~8 min

Questions to ponder:

1. What was the cause of his psychosis?
2. How long did his symptoms last?
3. Should this be considered a brief psychotic disorder?
    a. If yes, why?
    b. If no, why?
4. What medication did he take?
5. Do you think he may have schizophrenia?
6. Was it appropriate for him to have been hospitalized?
7. What lab tests would you order to assess the cause of his condition?
8. Should he be continued on an antipsychotic medication?
9. Did he return to his premorbid condition?

Psychotic Disorder Due to Another Medical Condition

- DSM -5 Criteria:
- A. Prominent hallucinations or delusions
- B. Evidence from H&P, P.E. or lab tests that disturbance is due to direct pathophysiological consequence of another medical condition
- C. Not better explained by another mental disorder
- D. The disturbance does NOT occur exclusively during the course of a delirium
- E. Marked distress and or impaired social, occupational function
  - Examples: Psychotic disorder due to:
    - 1. Malignant lung neoplasm, with delusions
    - 2. recurrent epilepsy, with hallucinations
    - 3. Head trauma with hallucinations

Other Specified Schizophrenia Spectrum and Other Psychotic Disorder

- **DSM -5 Criteria**
  - Symptoms characteristic of schizophrenia spectrum disorder that causes significant distress and impaired functioning but does not meet full criteria for other schizophrenia categories
  - **Examples:**
    - A. Persistent auditory hallucinations without other features
    - B. Delusional symptoms in partner of individual with delusional disorder :In context of a relationship delusional material from dominant partner provides content for belief

Other Specified Schizophrenia Spectrum and Other Psychotic Disorder (continued)

- Transmission of delusional beliefs from one person to another.
- Delusion develops in the context of a close relationship with another person, who already has an established delusion.
- Previously called folie a deux, shared psychotic disorder ("double insanity")
  - Usually members of same family i.e. siblings, parent and a child or husband and wife
  - Dominant person with delusions and more submissive suggestible person gains acceptance of the more dominant person by adopting his /her delusional beliefs.
  - Separation seems to help the submissive person.

Different Type Of Folie a Deux

Delusional Disorder

- DSM -5:
- A. Presence ≥ 1 Delusion, present ≥ 1 month
- B. Never met criterion "A" for Schizophrenia
- C. Apart from delusions, functioning not markedly impaired and behavior not markedly odd or bizarre.
- D. Any mood disturbance is brief compared to length of delusional periods
- E. Not due to medical or substance problem

Delusional Disorder (continued)

- Types of delusional themes:
- A. Erotomanic: Belief that another person is in love with the patient (Usually of higher status)
- B. Grandiose: Conviction of having some great talent (unrecognized) or insight or made some important discovery, inflated worth, power, knowledge, or special relation to deity or famous person.
- C. Persecutory: Conspired against, cheated, spied upon, poisoned, drugged.
- D. Jealous: Belief his or her spouse or lover is unfaithful
- E. Somatic : Belief one has physical defect, disorder, or disease such as AIDS

Unspecified Delusional Disorders)

- Delusions which cannot be subtyped into previous categories.
- A. Capgras Syndrome: Belief that a family member replaced by an imposter
- B. Fregoli's Phenomenon : Persecutors or familiar persons assume the guise of a stranger.
- C. Cotard' Syndrome: (A nihilistic delusion that a person has lost not only their possessions, status and strength but also their heart, blood and intestines
- D. Jealous: Belief his or her spouse or lover is unfaithful
- E. Somatic : Belief one has physical defect, disorder, or disease such as AIDS

After watching the video, see if you can answer the following:

1. Does she have a delusion? If so, what type?
2. Does she meet criteria "A" for schizophrenia?
3. Is she able to function on a job?
4. Does she use illicit substances?
5. Does she have a mood disorder?
6. If you were treating her for this disorder what would you be most concerned about?
7. Would you place her on a antipsychotic medication?

VIDEO

Delusional Disorder

Rita (F)

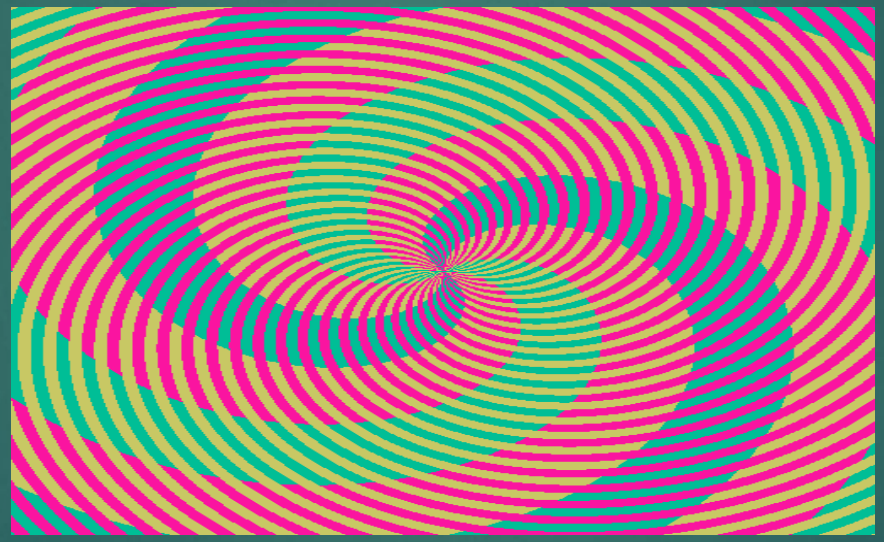
DSM III

1.2 (starts at 9:44) &

1.3

~6 min

Catatonia



Catatonia Associated with another Mental Disorder

- DSM -5:
- A. Clinical picture dominated by ≥ 3 of following symptoms

  1. Stupor (Extreme hypoactivity and immobility. Absence of movement or reaction when awake; not actively relating to the environment, yet fully conscious.)
- 2. Catalepsy: (Maintenance of fixed sitting or standing position against gravity that appears uncomfortable with minimal movement with response to external stimuli, including pain.)
- 3. Waxy flexibility (Patient can be positioned in uncomfortable positions that the patient maintains for long periods with slight resistance to examiner.)
- 4. Mutism (Extreme verbal unresponsiveness in the absence of aphasia.)
- 5. Negativism (opposition to instructions or external stimuli)

Catatonia Associated with another Mental Disorder

- **DSM 5**: A. ≥ 3 of following symptoms (continued)
- 6. **Posturing** (spontaneous and active maintenance of rigid positions against gravity)
- 7. **Mannerism** (odd caricature of normal actions, seem out of context such as suddenly grimacing or using hands when talking.)
- 8. **Sterotypy**: (repetitive, abnormal frequent, non-goal directed movements) (ex. Rocking, chewing, grimacing, shrugging, hand waving, etc.)
- 9. **Agitation** (Purposeless hyperactivity, not influenced by external stimuli)
- 10. **Grimacing** (Contortion of facial features)
- 11. **Echolalia** (mimicking another's speech)
- 12. **Echopraxia** (mimicking another's movements)

Examples: Catatonia associated with schizophrenia, MDD, etc.

Catalepsy/or waxy flexibility

Catatonia Disorder Due to Another Medical Condition

- **DSM -5:**
- A. Clinical picture dominated by ≥ 3 of following symptoms

  1. **Stupor** (Extreme hypoactivity and immobility. Absence of movement or reaction when awake; not actively relating to the environment, yet fully conscious.)
- 2. **Catalepsy**: (Maintenance of fixed sitting or standing position against gravity that appears uncomfortable with minimal movement with response to external stimuli, including pain.)
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Catatonia Disorder Due to Another Medical Condition

- DSM -5: A. ≥ 3 of following symptoms (continued)
- 6. Posturing (spontaneous and active maintenance of rigid positions against gravity)
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- 11. Echolalia (mimicking another' s speech)
- 12. Echopraxia (mimicking another' s movements)

Examples: Catatonia associated with schizophrenia, MDD, etc.

Catatonia Disorder Due to Another Medical Condition

- **DSM-5:**
- B. There is evidence from the history, P.E., or Lab findings the disturbance is direct consequence of another medical condition.
- C. The disturbance is better not explained by another mental disorder (e.g., manic episode)
- D. Disturbance does not occur exclusively during the course of a delirium.
- E. Disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- Ex: Catatonic disorder due to hepatic encephalopathy

Treatment of Catatonia

- **A. Benzodiazepines:**
  - **60-80% remission rate**
  - **Lorazepam: Used most often**

  B. Electroconvulsive Therapy (ECT)

  53-100% effectiveness

  C. Stop antipsychotics: Can worsen catatonia and lead to NMS

Malignant Catatonia: On rare occasions catatonia may progress to a state involving severe autonomic instability (BP sweating cardiac arrythmias, etc.) Mortality without treatment ~50%, Mortality with treatment can reach up to10 %. This is an emergency so treat in the ICU.

Catatonia Assessment: Bush Francis Rating Scale

A. Consists of 23 items

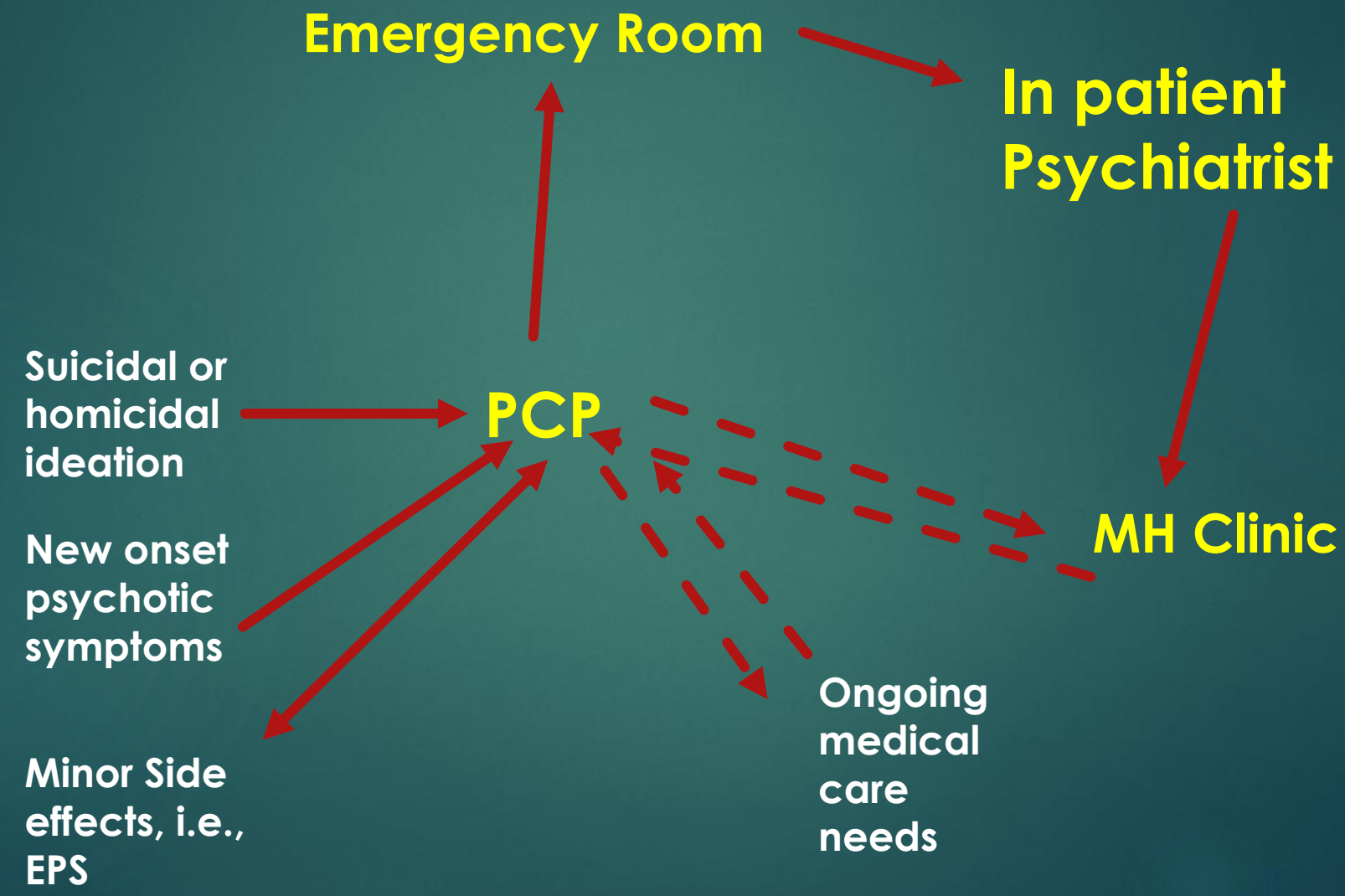
B. First 14 are screening items (Do full exam if ≥ 2 are positive)

1. Excitement
2. Immobility/Stupor
3. Mutism
4. Staring
5. Posturing/Catalepsy
6. Grimacing
7. Echopraxia/echolalia
8. Stereotypy
9. Mannerisms
10. Verbigeration
11. Rigidity
12. Negativism
13. Waxy Flexibility
14. Withdrawal
15. Impulsivity
16. Automatic Obedience
17. Mitgehen: Arm raising with light pressure
18. Gegenhalten: resistance to passive movement; appears automatic ; not willful
19. Ambitendency: Motorically stuck in indecisive hesitant movement
20. Grasp Reflex
21. Perseveration
22. Combativeness
23. Autonomic Instability

University of Rochester Medical Center Videos

CATATONIA VIDEOS

PCP referral of a patient with a psychotic disorder



Key Clinical Points

1. Schizophrenia has a variable course
   - Some recover and function at a fairly high level
   - Others are severely disabled forever
2. Longer periods of untreated psychosis are associated with
   - Poorer outcomes
   - Early intervention can reduce disability
3. Antipsychotic medications are cornerstone of treatment
   - Treat aggressively
   - Depot medications useful in noncompliant patient or,
     - Those who prefer bimonthly or monthly injection
     - Appear to prevent hospitalizations, reduce relapse rates and mortality (Psychiatric News 8/21)

Key Clinical Points (continued)

4. Continuous treatment with antipsychotics is recommended to prevent relapse

5. Clozapine most effective treatment for: treatment resistant schizophrenia, also very helpful in reducing suicide in patients.

6. Antipsychotic medications can cause side effects. Be especially alert for :
   - Extrapyramidal symptoms (EPS)
   - Tardive Dyskinesia
   - Metabolic syndrome
   - Neuroleptic malignant syndrome (NMS)

7. Family therapy is important for the patient who lives at home
   - Families need education about schizophrenia
   - Help families find a support group through local chapter of National Alliance on Mental Illness (NAMI)
8. Be observant for catatonia and treat appropriately.

Key Clinical Points (continued)

4. Continuous treatment with antipsychotics is recommended to prevent relapse

5. Clozapine most effective treatment for: treatment resistant schizophrenia, also very helpful in reducing suicide in patients.

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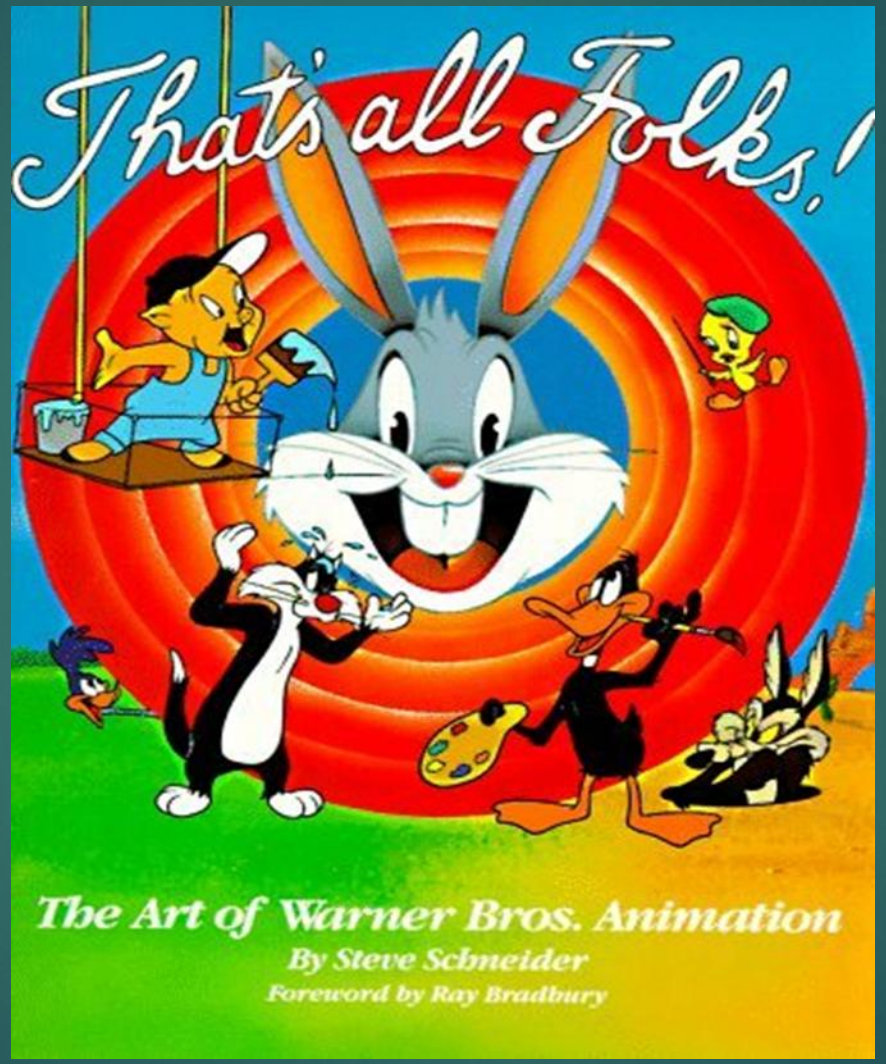
That's all Folks!
The Art of Warner Bros. Animation
By Steve Schneider
Foreword by Ray Bradbury