Management of Acute Psychosis - in the room.

Nathaniel Guimont - MD
June 7th. 2019

Take a breath...

Objectives

- Develop a broad differential and narrow based on clinical presentation
- Have a framework for the initial workup for acute psychosis
- Know when and how to initiate a safe treatment plan

Outline

- Background
- Primary Psychosis
- Secondary Psychosis
- Workup/Evaluation
- Treatment
- Referral

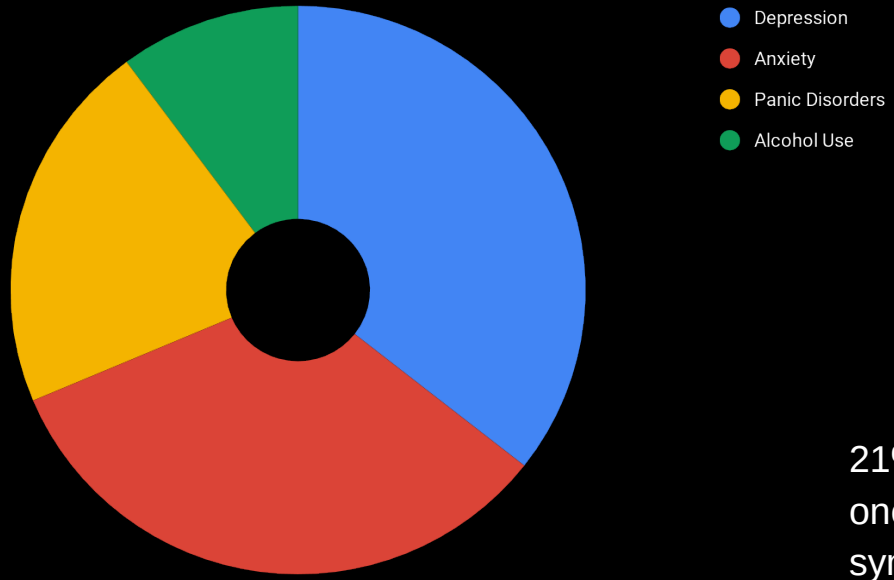
Definitions – Psychosis

- “Gross impairment in reality testing” or “loss of ego boundaries” that interfere w/ capacity to meet ordinary demands of life.
  (Early DSM editions)

- A condition of the mind broadly defined as loss of contact w/ reality
  (UTD)

- Symptom complex that may include hallucinations, delusions, disorders of thought, disorganized speech or behavior.
  (Griswold, AAFP)

Psychosis is common



21% of Pts reported one or more psychiatric symptoms...

By the numbers

- 21% of patients seeking primary care experience psychotic symptoms
  - 1 -4% will meet criteria for for psychiatric disorder (UTD)
  - 3% lifetime prevalence of psychotic disorders in general population (AAFP)
  - 1% world wide prevalence of schizophrenia

Etiology

- Dopamine Hypothesis
- Serotonin Hypothesis
- N methyl D Aspartate Receptor Hypofunction

Barriers to early care

- Patient lack of insight into illness
- Self stigma and societal stigma
- Customary separation of mental illness from general medicine
- Substance use disorder is observed in 50% of patients presenting with early psychosis

Manifestations of psychosis

- Delusions
  - Strongly held false beliefs not typical of Pt’s cultural or religious background
- Hallucinations
  - Wakeful sensory experiences of content that is not actually present
- Illogical/Disorganized Thoughts
- Illogical/Disorganized Behavior
  - Agitation/aggression
- Negative Symptoms/ Neurocog Deficits

Back to your patient. What's going on?

- Background
- Primary Psychosis
- Secondary Psychosis
- Workup/Evaluation
- Treatment
- Referral

What’s going on?

Primary

- Bipolar (type 1)
- Depression w/ psychosis
- Brief Psychotic disorder
- Schizoaffective disorder
- Schizophrenia
- Delusional Disorder

Secondary (Condition)

- Substance Use/Medication
- Endocrine
- Genetic
- Infection
- Metabolic
- Rheum
- Neuro
- Nutritional
- Oncologic

Primary Psychosis - Schizophrenia

- Symptoms per DSM V and significant difficulty in 1+ major function
  - Auditory hallucinations, delusions, paranoia
  - Disorganized speech and behavior
  - Decline in ability to work/maintain relationships
- First break late adolescence or early adulthood
  - (males mid-20s, females late 20s)

Schizophrenia	Schizophreniform	Brief Psychotic Event
More than 6 months	1 - 6 months	1d to 30d

Primary psychosis - Mood Disorders

Major Depression	Bipolar	Schizoaffective disorder
• Mood congruent delusions and hallucinations	• Manic > depressive state • Mixed themes of hallucinations and delusions.	• Overlap w/ schizophrenia and mood disorder • Psychiatric symptoms do occur exclusively during mood disturbance
Occur in 14% of patients w/ MDD	Psychosis prevalence was: - 19 % (manic) - 15 % (depressive)	Prevalence estimated at < 1% (0.5-0.8%) in general population

Primary psychosis - Delusional disorder

- These are psychotic disorders characterized by usually isolated delusions
  - Without hallucinations
  - Without negative or cognitive symptoms
- Typically without deterioration of social function
- They last *longer than 1 month.*

So what do I need to exclude?

- Background
- Primary Psychosis
- Secondary Psychosis
- Workup/Evaluation
- Treatment
- Referral

Secondary Psychosis – Condition based

- Substance Use/Medication
- Endocrine
- Genetic
- Infection
- Metabolic
- Rheum
- Neuro
- Nutritional
- Oncologic

Secondary Psychosis - Substance use/Medication

- Common cause, but not always an isolated cause
- U-tox is not going to show everything
- Review med lists

Alcohol (intoxication/withdrawal), barbs and benzo (withdrawal)
Anabolic steroids
Antivirals (abacavir, efavirenz, acyclovir)
Analgesics (meperidine, pentazocine, indomethacin)
Anticholinergics (atropine, scopolamine)
Antidepressants (bupropion, SSRI trigger mania)
Anti Parkinson's

Cannabinoids
Cardiovascular (digoxin)
Corticosteroids
Hallucinogens
Inhalants (toulene, butane, gasoline)
OTC (dextromethorphan, diphenhydramine, decongest)
Antimalarial
Antiepileptics (zonisamide, keppra)
Stimulants
Toxins (CO, organophos, heavy metals)

Secondary Psychosis - Endocrine

- Pituitary Adenoma
- DM Type 1 or 2
- Thyroid
  - Myxedema
    - Capgras syndrome (delusions of impostors), paranoa
    - Psychosis in 5-15% of Pts
  - Thyrotoxicosis
    - Particularly thyroid storm and agitation
- Parathyroid disease
  - Stones, bones, psychiatric overtones (confusion, fatigue, hallucinations)

Secondary Psychosis - Infection

- Encephalitis/meningitis
  - Limbic involvement
  - Bizarre behaviour, decreased sensorium
- HIV- associated neurocognitive disorder (HAND)
  - Asymptomatic Neurocog Impairment, Mild Neurocog Disorder, HIV associated Dementia
- Neurosyphilis
  - Cognitive deficits, visual disturbance
  - Meningovascular - personality changes

Secondary Psychosis - Metabolic Conditions

- Acute intermittent porphyria
  - Peripheral neuropathy
  - May only be psychosis
- Delirium due to:
  - Electrolyte abnormalities
    - Hypercalcemia
    - Hyponatremia
  - Hypoxia
  - Hypercapnia

Secondary Psychosis - Neurological

- **Brain Tumors/Space occupying lesions**
  - Unilateral neuro signs, visual hallucinations
- **Epilepsy**
  - Primary temporal lobe epilepsy, deja vu, dissociation, visual hallucination
  - Psychosis in 7-11%
- **Dementia**
  - 16-23% experience psychosis in older adults
- **Lewy Body Disease**
  - Exec dysfunction, fluctuating awareness, parksonian
  - Visual hallucinations
- **Parkinson**
- **Stroke - Cortical or subcortical**
  - (R temporal-parietal-occipital junction)

Secondary Psychosis - Genetic

- **Huntington disease**
  - Auto Dominent
  - Chromosome 4, Age 40
- **Tay Sachs**
  - Auto Recessive
  - Ashkenazi jews, French Canadian, Cajun population
  - Psychosis in ⅓ - ½ of Pts
- **Wilson Disease**
  - Auto Recessive - 1/90 carriers
    - 1:30,000 - 40,000 world-wide
    - 9,000 estimated in US
  - Delusions, Schizophrenia like psychosis, tremor, vomiting

Secondary Psychosis - Rheum

- **SLE**
  - Psychosis occurs in 5-15% of patients
- **Multiple sclerosis**
  - Uhthoff phenomenon
  - Useless hand of Oppenheim

Secondary Psychosis - Nutritional

- **Thiamine (B1)**
  - Confabulation
  - Seen in Korsakoff psychosis or Wernicke encephalopathy
- **Niacin (B3)**
  - Photosensitive dermatitis, diarrhea, dementia
  - Delusions, hallucinations
  - Hx of alcoholism or eating disorder, international
- **Vitamin (B12)**
  - Psychotic symptoms in late childhood, early adolescents or in older adults
  - Persecutory delusions or hallucinations

Secondary Psychosis - Oncogenic

- Ovarian teratoma
- Paraneoplastic limbic encephalitis
- Neuroendocrine carcinoid cancer
- Adrenocorticotropic hormone carcinoma

Where do I even start?

- Background
- Primary Psychosis
- Secondary Psychosis
- Workup/Evaluation
- Treatment
- Referral

Work-up: History

- Likely Challenging
- Make sure you are safe
- Open ended questions on the patient's concerns -> closed questions
- Longstanding? Distressing?
  - Prior history
- ROS
  - Head trauma?
  - Hx of seizures, CVA, HA
- Social Hx:
  - Recent stressors or trauma
  - Sexual History
  - Occupational exposure
  - Substance use
- FHx
  - Heritable causes
  - Mental health
- Ask directly about SI/HI
- Get collaboration

Work-up: History

Primary

- Family History
- Insidious onset
- Onset in teens to mid-thirties
- Auditory hallucination
  - 3rd person vs 2nd person
- Level of consciousness is intact usually
- Complicated delusions

Secondary

- Family history absent
- Acute vs subacute onset
- Presents in general medical setting or ICU
- Non-auditory hallucinations
  - (vision, tactile, olfactory)
- Abnormal vitals

Work-Up: Physical Exam

- Fever:
  - Encephalitis/Infection
  - Porphyria
- HEENT
  - Pupil size
  - Kayser- Fleischer rings
  - Thyroid
- Cardiac
  - Tachycardia:
    - Thyrotoxicosis
    - Drug intox vs withdrawal
    - infection
- Abdomen
  - Ascites
  - Hepatomegaly
- Physical signs:
  - Cushingoid
- Skin
  - Jaundice
  - Track marks
  - “Butterfly rash”
- Neuro:
  - Focal neuro signs
  - Sensory deficits
  - Tremors
  - CN testing
  - Reflexes
  - Movement/ gait disorders

Work Up: Mental Status Exam

- General appearance and behaviour
- Motor activity
- Speech
- Mood: Subjective
- Affect: Outward expression of mood
- Orientation
- Memory
- Cognitive impairment
- Concentration/Attention

Culture, native tongue, level of education, literacy and social factors must be taken into account

Work-up: Labs

- Basic Workup
  - CBC
    - WBC w/ dif
  - CMP
    - Renal, glucose, hepatic, Na and Ca
  - TSH - reflex to T4
  - Urine tox
  - HIV, RPR
- Targeted based on impression
  - Parathyroid
  - Nutrition: B12, B1, niacin
  - UA

- Other considerations
  - EEG
  - LP
  - Heavy metal screen
  - Autoimmune: ESR, ANA
  - Cu studies
  - Porphyrin urine studies
  - Serum cortisol
- Imaging should be reserved for patients with HA, focal neuro findings, or head trauma

Evaluation: Diagnosis

- Primary disorder Dx may be revised weeks to yrs later
- If clinically significant mood symptoms are present
  - **Think bipolar or MDD**
- If overlap of psychosis for majority but not all of psychiatric illness
  - **Consider schizoaffective**
- If limited overlap of psychosis and mood:
  - **Brief psychotic disorder**
  - **Schizophreniform**
  - **Schizophrenia**
  - **Delusional disorder**

How can I help?

- Background
- Primary Psychosis
- Secondary Psychosis
- Workup/Evaluation
- Treatment
- Referral

Treatment: When to Start

- Consider symptomatic Tx - Antipsychotics
- Traditionally studied in schizophrenia but effective in wide range of disorders
  - Overlap in substance use and schizophrenia
  - APA - Choosing Wisely
- Early antipsychotic use:
  - Can decrease risk of suicide
  - Reduce agitation
- Discuss risk
- Take into account Pt distress and motivation
- Spontaneous remission

Treatment: Antipsychotics

- Absence of data to suggest anyone is better other than clozapine
- Start initial dose and titrate up as quickly as tolerated
  - Example:
    - Risperidone 1-2mg/day, if no response w/in 7d dose can be go up 0.5mg-1mg increments to max of 8mg
    - Titrate to therapeutic dose of 2-6mg
  - If no improvement after 2w of therapeutic dose try another agent

- Duration:
  - Schizophrenia - indefinitely
    - Brief Psychiatric Disorder: 1-3m following resolution
  - Time limited
    - 2w after resolution of symptoms then tapered

Minimum effective dosing - Cochrane Review

Typical antipsychotics			
Chlorpromazine	200 mg	Thornley et al[w7]	Better than placebo, but weight gain, extrapyramidal side effects, and sedation are prominent
Haloperidol	2 mg	Joy et al[w8]	Same efficacy as other typical antipsychotics but tolerated poorly; should not be used as control drug in trials
Pimozide	4 mg	Sultana et al[w9]	Same efficacy as other typical antipsychotics; no added benefit in delusional disorder
Perphenazine	—	Hartung et al[w10]	Same efficacy as other typical antipsychotics, but side effects probably under-reported by older studies
Sulpiride	400 mg	Soares et al[w11]	Same efficacy as other typical antipsychotics; side effects probably less frequent (18 small studies)
Trifluoperazine	10 mg	Marques et al[w12]	Same efficacy as other antipsychotics but extrapyramidal side effects similar to typical antipsychotics
Zuclopenthixol acetate	—	Gibson et al[w13]	Similar to haloperidol in efficacy and side effects, including sedation

Atypical antipsychotics			
Amisulpride	400 mg	Mota-Neto et al[w14]	Better efficacy and fewer side effects than typical antipsychotics; no better than risperidone
Aripiprazole	15 mg	El Sayeh et al[w15]	Not clearly different from other antipsychotics; fewer side effects on the heart and prolactin
Clozapine	250-550 mg	Wahlbeck et al[w16]	Convincing evidence of better efficacy over all other drugs (31 studies)
Olanzapine	5 mg	Duggan et al[w17]	No better than typical antipsychotics; fewer extrapyramidal side effects but greater weight gain than others
Quetiapine	150 mg	Srisurapanont et al[w18]	Similar to typical antipsychotics; fewer extrapyramidal side effects but sedative prominent
Risperidone	2 mg	Gilbody et al[w19]	Efficacy similar to amisulpride and olanzapine; not as good as clozapine
Risperidone depot	—	Hosalli et al[w20]	Better tolerated than placebo; probably useful in confirmed non-adherence
Zotepine	75 mg	DeSilva et al[w21]	More efficacious than typical antipsychotics and fewer extrapyramidal side effects

Side Effects

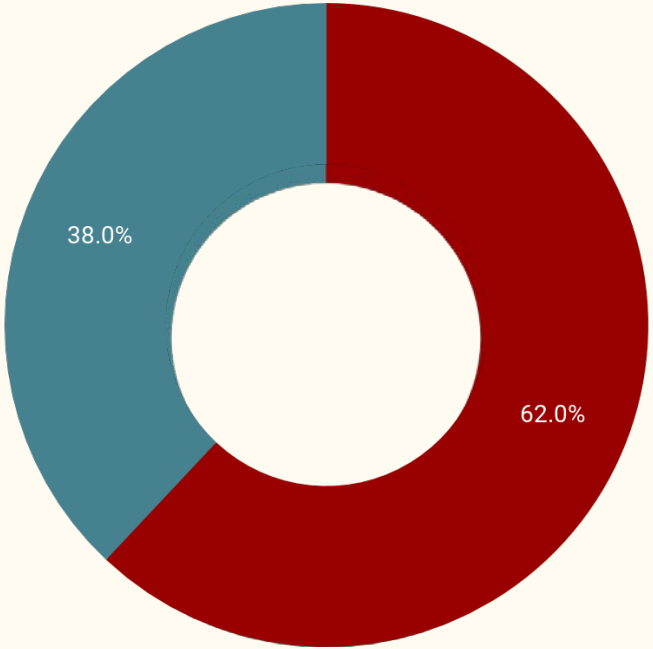
Table 9-6.

Antipsychotics and Side-Effect Profile

	Target Dose (mg/d)	Metabolic Effect[a]	EPS	PRL	Sedation	Anticholinergic	Hypotension
Quetiapine XR ***Seroquel XR***	300-800	++	+/–	–	+++	+	+++
Risperidone[b] ***Risperdal***	4-6	++	++	+++	++	–	++
Aripiprazole ***Abilify***	10-30	+	+	–	+	–	+
Ziprasidone[c] ***Geodon***	160	+	+	+	++	–	+
Olanzapine ***Zyprexa***	10-20	+++	+	+	++	++	+/–
Clozapine[d] ***Clozaril***	300-450	+++	+	+	++	++	++

Treatment: Limitations

- Best for positive symptoms:
  - Hallucinations
  - Delusions
- Less helpful for negative symptoms:
  - Blunted affect
  - Lack of interest/engagement
  - Cognitive defects
- Relapse is common



Treatment: Additional interventions

- CBT - reduces impact of symptoms
- Psychoeducational interventions
- Family interventions and support
  - Prevent relapse
  - Greater acceptability
- Promoting substance abstinence
- Supported employment
- Case management

Treatment: Dispo

- Evaluation and treatment should be voluntary whenever possible
  - Nature of illness makes avoidance common
- Initial onset of primary psychosis should be evaluated by a psychiatrist
- Evaluate support at home

Who can I call?

- Background
- Primary Psychosis
- Secondary Psychosis
- Worku/Evaluation
- Treatment
- Referral

Referral: Resources

- ER
  - To be evaluated by Designated Crisis Responder
  - 1st time psychosis
  - HI/SI, agitation
  - Not in services currently
- Community Resources
  - DESC
  - Sound
  - Valley
  - Navos
  - CPC
  - Harborview

Civil Commitment - Washington State DSHS

- A civil commitment is the second of the two routes for admission to a state psychiatric hospital in Washington.
  - It begins with an **evaluation by a county-designated mental health professional**.
  - The mental health professional can commit a patient to a hospital for a 72-hour evaluation if he or she is *dangerous to themselves or others* due to a mental disorder.
  - Petition is made for 14d involuntary treatment or 90d of less restrictive alternative

- Plans begin with the question: "What does the patient need to recover to the point of being ready for discharge?"

Grave Disability

(1) In making a determination of whether a person is gravely disabled, *presents a likelihood of serious harm*, or is in need of assisted outpatient behavioral health treatment in a hearing conducted under RCW 71.05.240 or 71.05.320, the court must consider the symptoms and behavior of the respondent in light of all available evidence concerning the respondent's historical behavior.

(2) Symptoms or behavior which standing alone would not justify civil commitment may support a finding of grave disability or likelihood *of serious harm*, or a finding that the person is in need of assisted outpatient behavioral health treatment, when:

(a) Such symptoms or behavior are closely associated with symptoms or behavior which preceded and led to a past incident of involuntary hospitalization, *severe deterioration, or one or more violent acts*;

(b) these symptoms or behavior represent a marked and concerning change in the baseline behavior of the respondent; and (c) without treatment, the continued deterioration of the respondent is probable.

(3) In making a determination of whether there is *a likelihood of serious harm* in a hearing conducted under RCW 71.05.240or 71.05.320, the court shall give great weight to any evidence before the court regarding whether the person has:

(a) A recent history of *one or more violent acts;*

or (b) a recent history of one or more commitments under this chapter or its equivalent provisions under the laws of another state which were based *on a likelihood of serious harm*.

The existence of prior violent acts or commitments under this chapter or its equivalent shall not be the sole basis for determining whether a person *presents a likelihood of serious harm.*

For the purposes of this subsection "recent" refers to the period of time not exceeding three years prior to the current hearing.

Washington State Supreme Court Committee Jury Instructions

- It is **not enough** to show that care and treatment of an individual's mental illness would be *preferred or beneficial or even in his or her best interests.*

- To justify commitment, such care must be **shown to be essential to an individual's health or safety** and the evidence should indicate the **harmful consequences** likely to follow if involuntary treatment is not ordered.

Take Home

- Take a good history
- Focus the differential based on:
  - Age
  - Presentation
  - Story
- Do not prematurely close on the diagnosis
- Consider starting treatment while connecting patients to care
- Start with some baseline labs
- It may take time for diagnosis to be clarified

References

- Byrne, Peter. “Managing the acute psychotic episode.” BMJ 2007; 334:686
- William Swedish ER LSW
- Griswold et al “Recognition and Differential Diagnosis of Psychosis in the Primary care.” American Family Physician 2015 Jun 15;91 (12):856-863
- Arciniegas, David “Psychosis” Continuum 2015 June;21 (3 Behhavioral Neurology and Neuropsychiatry): 713 -736
- Sullivan S., et al. “ Association of Primary Care Consultation Patterns w/ Earl Signs and symptoms of Psychosis.” JAMA Network Open Nov, 30 2018
- “Accessing mental- health Treatment requires stiff criteria.” Seattle Times. May 31 2012 https://www.seattletimes.com/seattle-news/accessing-mental-health-treatment-requires-stiff-criteria/
- Norris, D. et al. “The Mental Status Exam.” American Family Physician. Oct 15, 2016
- Marder, S. et al “Clinical manifestations, differential diagnosis and initial management of psychosis.” UptoDate. Accessed April -May 2019
- Conus P, Cotton SM, Francey SM, O'Donoghue B, Schimmelmann BG, McGorry PD, Lambert M “Predictors of favourable outcome in young people with a first episode psychosis without antipsychotic medication.” Schizophr Res. 2017;185:130. Epub 2017 Jan 6
- Al-Sahlawi, K “Violence Against Doctors” European Journal Emegency Medicine. Dec 1999 https://www.ncbi.nlm.nih.gov/pubmed?term=10646917
- Cadenheard, K. “First Episode Psychosis” Uptodate accessed April - May 2019
- Best practice: assessment of psychosis. What causes severe mental illness, psychosis and mania? http://psychoticdisorders.wordpress.com/bmj-best-practice-assessment-of-psychosis. Accessed May 2019
- Smith, Robert et Al Essentials of Psychiatry in the Primary Care. Chap 9 “Psychotic Disorders”
- https://www.dshs.wa.gov/bha/division-state-hospitals/civil-commitment-inpatient-services
- Ostergaard SD, Bertelsen A, Nielsen J, Mors O, Petrides G. “The association between psychotic mania, psychotic depression and mixed affective episodes among 14,529 patients with bipolar disorde. J Affect Disord. 2013;147(1-3):44.
- Malhi GS, Green M, Fagiolini A, Peselow ED, Kumari V. Schizoaffective disorder: diagnostic issues and future recommendations. Bipolar Disord. 2008 Feb;10(1 Pt 2):215-30.
- Washington Jury Instructions- https://govt.westlaw.com/wciji/Document/I2cd40da2e10d11dab058a118868d70a9?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)

Prodromal phase: Predictors of psychosis

- Two-thirds of patients who go on to develop schizophrenia experience prodromal symptoms
- Twelve symptoms were associated with a later psychotic diagnosis

Table 2. Multivariable Conditional Logistic Regression of the Association Between Symptoms Recorded During Primary Care Consultations and a Diagnosis of Psychosis

Symptom	Study Group, No. (%)		OR (95% CI)[a]	*P* Value
	Cases (n = 11 690)	Controls (n = 81 793)		
Bizarre behavior	16 (0.1)	5 (0.01)	21.70 (7.94-59.28)	<.001
Suicidal behavior	762 (6.5)	326 (0.4)	19.06 (16.55-21.95)	<.001
Cannabis-associated problems	90 (0.8)	37 (0.04)	15.92 (11.23-22.58)	<.001
Depressive symptoms	7639 (65.4)	13 256 (16.2)	12.11 (11.53-12.72)	<.001
Blunted affect	17 (0.1)	16 (0.02)	7.69 (3.83-15.44)	<.001
ADHD-like symptoms	216 (1.8)	237 (0.3)	7.22 (5.96-8.74)	<.001
OCD-like symptoms	143 (1.2)	144 (0.2)	6.91 (5.50-8.69)	<.001
Social isolation	68 (0.6)	61 (0.1)	6.64 (5.05-8.74)	<.001
Role functioning problems	90 (0.8)	132 (0.2)	5.60 (4.39-7.15)	<.001
Symptoms of mania	2457 (21.0)	5122 (6.3)	4.66 (4.39-4.93)	<.001
Sleep disturbance	846 (7.2)	2424 (3.0)	3.22 (2.94-3.54)	<.001
~~Personal hygiene problems~~	~~3 (0.02)~~	~~9 (0.01)~~	~~2.60 (0.66-10.26)~~	.17
Smoking-associated problems[b]	3170 (27.1)	13 820 (16.9)	2.00 (1.90-2.10)	<.001

Prodromal Questionnaire- 16:
Score of 6 or more

		If True: How much distress did you experience?					
		True	False	No(0)	Mild(1)	Moderate(2)	Severe
1. I feel uninterested in the things I used to enjoy.		❑	❑	❑	❑	❑	❑
2. I often seem to live through events exactly as they happened before (déjà vu).		❑	❑	❑	❑	❑	❑
3. I sometimes smell or taste things that other people can't smell or taste.		❑	❑	❑	❑	❑	❑
4. I often hear unusual sounds like banging, clicking, hissing, clapping, or ringing in my ears.		❑	❑	❑	❑	❑	❑
5. I have been confused at times whether something I experienced was real or imaginary.		❑	❑	❑	❑	❑	❑
6. When I look at a person, or look at myself in a mirror, I have seen the face change right before my eyes.		❑	❑	❑	❑	❑	❑
7. I get extremely anxious when meeting people for the first time.		❑	❑	❑	❑	❑	❑
8. I have seen things that other people apparently can't see.		❑	❑	❑	❑	❑	❑
9. My thoughts are sometimes so strong that I can almost hear them.		❑	❑	❑	❑	❑	❑
10. I sometimes see special meanings in advertisements, shop windows, or in the way things are arranged around me.		❑	❑	❑	❑	❑	❑
11. Sometimes I have felt that I'm not in control of my own ideas or thoughts		❑	❑	❑	❑	❑	❑
12. Sometimes I feel suddenly distracted by distant sounds that I am not normally aware of.		❑	❑	❑	❑	❑	❑
13. I have heard things other people can't hear like voices of people whispering or talking.		❑	❑	❑	❑	❑	❑
14. I often feel that others have it in for me.		❑	❑	❑	❑	❑	❑
15. I have had the sense that some person or force is around me, even though I could not see anyone.		❑	❑	❑	❑	❑	❑
16. I feel that parts of my body have changed in some way, or that parts of my body are working differently than before.		❑	❑	❑	❑	❑	❑

Treatment: Mood disorders

- **MDD w/ psychosis**
  - Combo therapy antipsychotic w/ antidepressant
  - ECT for those that do not respond to 1 or 2 courses of combo therapy
- **Bipolar**
  - Acute hypomania or mild to moderate mania:
    - zyprexa or risperidone (alternatives)
  - Severe Mania:
    - lithium or valproate plus antipsychotic
  - If severe and not responsive to combo consider additional combos (4-6) before ECT

Delirium

Acute, transient disturbance in mental function

- Latin word and the related verb *delirare* (“to be out of one’s mind”)

Evaluate for:

- *Hypo/hyperglycemia*
- *Hypoxemia*
- *ICU*
- *Medication interaction/withdrawal*
- *Sepsis*
- *Electrolyte abnormality*
- *Sleep Deprivation*