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First Episode Psychosis: Information for Physicians

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Summary: Psychosis is a brain disorder in which there is a loss of contact with reality, with problems with thinking, feeling, perception and action. Many communities will have first episode psychosis programs or mental health services where a patient with first episode psychosis can be referred to. Antipsychotic medications are the first-line treatment for first episode psychosis. Primary care physicians play a key role, as early identification and treatment makes an important difference in outcome. Many patients with first episode psychosis will eventually be diagnosed as later having schizophrenia, but a significant proportion will also resolve and not have any future problems with psychosis.

Epidemiology

Approximately 3 out of every 100 people will experience at least one psychotic episode in their lifetime.
Approximately 1 in 100 will be diagnosed with schizophrenia.
The first episode of psychosis usually occurs in adolescence or early adulthood.

Case

Suzy is a 17-year-old female who lives with her parents and attends high school. She has always been somewhat withdrawn and quiet. Over the past few months, however, she has been mumbling to herself, and has been more irritable, and lost interest in school and extracurricular activities. Her parents and teachers are concerned about her consistently ‘bizarre’ behaviour.
Her family brings her to see you, saying, "There's something not right about her."

Signs and Symptoms

Early childhood:

- Language delays
- Motor problems such as late or unusual crawling; late walking

Children and youth

- Troubles with
    - Mood

    - Sleep
    - Loss of motivation, where they stop doing activities they previously did.
- **"Positive" symptoms**
    - **Hallucinations.** Hallucinations can involve any of the senses, but these usually involve seeing or hearing things that don't exist.
    - **Delusions.** False beliefs that have no basis for reality. For example, you believe that you're being harmed or harassed; certain gestures or comments are directed at you; you have exceptional ability or fame; another person is in love with you; a major catastrophe is about to occur, or your body is not functioning properly. These can be more difficult to distinguish nowadays given all the extreme views, e.g. that vaccines are a conspiracy, that the election was stolen. It can help to see if the person's views are outside of what their group norms would be for their family, or their peer / friend group, or spiritual community. Compared with adults, teens may be less likely to have delusions and more likely to have visual hallucinations.
    - **Disorganized thinking (speech)**. Disorganized thinking is inferred from disorganized speech. Effective communication can be impaired, and answers to questions may be partially or completely unrelated. Rarely, speech may include putting together meaningless words that can't be understood, sometimes known as word salad.
    - **Disorganized or abnormal motor behaviour**. This may show in a number of ways. Behaviour is not focused on a goal, which makes it hard to perform tasks. Abnormal motor behaviour can include resistance to instructions, inappropriate and bizarre posture, a complete lack of response, or useless and excessive movement (catatonia).
    - **Unusual or strange behaviour**, which can result from all the above.
- **"Negative" symptoms with impaired function**
        - Social skills, e.g. losing ability to make eye contact, talk to people (i.e. talking much less), loss of personal care (e.g. neglecting personal hygiene), loss of interest in everyday activities (i.e. withdrawal from activities and routines).
        - Home, e.g. withdrawal from home activities, spending all their time in their room.
        - School, e.g. drop in marks or work performance.

Hx/Interviewing Questions

For the parents / youth:

Hallucinations	Visual: Seeing any things that others can't? E.g. seeing shadows, strange figures that no one else can see? Auditory: Hearing any things that others can't? E.g. hearing any voices talking when no one is around? Tactile: Feeling any unusual sensations? E.g. like bugs crawling on your skin? Olfactory: Noticing any unusual smells or tastes?
Delusions	Normalizing statement: Everyone has beliefs in certain things. Some people are religious. Some people believe in UFOs. General: Any ideas that you just can't get out of your mind? Paranoia: Are you worried that there might be people out to get you? Do you ever fear for your safety? Hyperreligiousity: Are you religious? How religious? Do you feel a special connection with (your religion, e.g. God) that goes beyond what others have? Grandiosity: Any special abilities that you have? Tell me more… Thought broadcasting: At times does it feel as though people know, and can hear all of your thoughts? Ideas of reference: Do you ever feel that the Internet, websites, radio or TV are talking about you? Somatic delusions: Any worries about your health?
Function	Any difficulties functioning at home? At school? At work? Out in public?

Psychiatric DDx of Psychosis

Schizophrenia	Signs of illness for > 6 months; psychotic symptoms (two or more of a) delusions, b) hallucinations, c) disorganized speech, d) disorganized or catatonic behavior, e) negative symptoms) for > 1 month; social/occupational dysfunction.
Schizophreniform disorder	Similar to schizophrenia except that the duration of psychosis < 6 months.
Schizoaffective disorder	Symptoms of schizophrenia and mood disorder occur at the same time together, and > 2 weeks of delusions or hallucinations in absence of prominent mood symptoms.
Delusional disorder:	Delusions (irrational or intense beliefs) that the person beliefs are possible. May be non-bizarre (i.e. within the realm of possibility) or bizarre. Delusions have lasted for > 1 month and does not meet criteria for schizophrenia.
Brief psychotic disorder:	Psychotic symptoms that last anywhere between 1-30 days, and may or may not be related to marked stress. Resolves, with the patient eventually returning to the premorbid level of functioning.
Substance-induced psychotic disorder:	Delusions or hallucinations that are triggered by substance use, which starts within 1-month of substance use (or withdrawal) Common examples include: • Cocaine, amphetamines, ecstasy, LSD, PCP, anabolic steroids • Alcohol, benzodiazepine, barbiturate, GHB withdrawal • Prescription medications: L-dopa, steroids, anti-retrovirals, anti-tubercular agents.
Psychotic disorder due to general medical condition:	Delusions or hallucinations are the direct physiologic due to a general consequence of a medical condition and occur in the medical condition absence of delirium.
Psychotic disorder not otherwise specified:	Psychotic symptoms present but criteria for a specific otherwise specified disorder is not met, or there is insufficient or contradictory information.
Major depression with psychotic features:	Major depressive episode with mood-congruent psychotic features (most common), or mood incongruent psychotic symptoms.
Bipolar disorder:	Manic episode with mood congruent (most common, where psychosis symptoms are in keeping with the mood state, e.g. in manic, euphoric mood, patient may have delusions of grandeur), or mood incongruent psychotic symptoms (where patient's delusions are not in keeping with the mood).

Medical DDx of Psychosis

- Developmental conditions:
  - Prader-Willi
  - Velocardiofacial syndrome (aka DiGeorge syndrome)
- Neurological:
  - Epilepsy, such as temporal lobe epilepsy (TLE)
  - Anti-NMDA encephalitis
- Neoplasm:
  - Trauma to frontal or limbic areas
- Infectious:
  - HIV
  - Neurosyphilis
  - Creutzfeld-Jakob Disease (CJD)
  - Herpes encephalitis
- Metabolic:
  - Hyper/hypothyroidism,

    - Hyper/hypoparathyroidism
    - Acute intermittent porphyria
    - Homocystinuria
    - Wilson’s disease
    - Wernicke's encephalopathy
- Auto-immune:
    - Systemic lupus erythematosus (SLE)
    - Cerebral lipoidosis
- Toxic / poisoning:
    - Heavy metals
    - Carbon monoxide (CO), Solvents
- Nutritional:
    - B12 deficiency
    - Folate deficiency

Physical Exam (Px)

Contact a physical exam that includes a neurological exam.

- Any symptoms of extrapyramidal symptoms (EPS)?

Investigations

- CBC, electrolytes, BUN, Cr, AST, ALT, Ca, PO4, TSH, B12, folate, fasting glucose and lipid profile
- Urinalysis
- Toxicology/Drug screen in order to rule out possible substance intoxication/withdrawal
- EKG
- EEG
- CT/MRI may be indicated if structural brain problems are suspected

Management in Primary Care

Rule out psychosis due to general medical conditions.

- Treat any underlying conditions such as
    - Vitamin B12 / folate deficiency.
    - Thyroid issues
    - Etc.

Psychoeducation

- Educating the patient and family about psychosis.

Discontinue any medications that can cause or contribute to psychosis such as:

- Stimulants (e.g. ADHD medications, or caffeine)
- Dopamine agonists
- Steroids
- Recreational drugs (e.g. marijuana, stimulants)

Prior to recommending treatment such as medications, focus first on building a therapeutic alliance

- Physician: "I'm concerned about you. I'm worried about _____. What do you think?"
- If the patient agrees with the physician regarding goals, then try to find an agreement about medications

- If the patient disagrees with the physician, then try to find some other goal that you can agree on with the patient

Relapse planning

- Teach patient/family about signs of psychosis; where to go and what to do if psychosis worsens

Lifestyle interventions

- Have a regular bedtime and get enough sleep.
- Have regular exercise.
- Eat a healthy diet.
- Avoid recreational drugs especially marijuana, stimulants, and hallucinogens.
- Be careful with stimulants such as too much caffeine, nicotine.

Management in Primary Care: Medications

The earlier that medications are started, the better the eventual outcome.

Thus, even if a patient has been referred to specialized services, since waitlists may be very long, it is reasonable to start antipsychotic medication treatment in the interim.

Medications are the same as used for schizophrenia, however usually lower dosages are used because patients are medication-naive.

Start with a low dose of an atypical antipsychotic chosen on the basis of potential side effects and target symptoms.

- In general, consider starting with medications that have less metabolic effects, such as aripiprazole, ziprasidone, lurasidone.

Are there comorbid mood/bipolar symptoms? Consider Olanzapine.

Are there symptoms significant insomnia / anxiety? Consider Quetiapine.

Increase dosage as needed with the expectation of evidence of clinical improvement in 6-8 weeks.

Duration of treatment usually at least 12-months following first episode.
Monitor patients on antipsychotic medications following CAMESA Guidelines

- Baseline
  - BMI, personal/family history, waist circumference
  - Symptoms of hyperglycemia (advise patients of hyperglycemia symptoms)
- At week 4,8, and 12-weeks
  - Reassess weight change at 4, 8, and 12 weeks after initiation or change in antipsychotic therapy and quarterly thereafter
- At 3-months and annually
  - Reassess fasting plasma glucose, lipids, and blood pressure at 3 months and annually thereafter.

Adapted from American Diabetes Association, American Psychiatric Association, American Association of Clinical Endocrinologists, North American Association for the Study of Obesity. Consensus development conference on antipsychotic drugs and obesity and diabetes. Diabetes Care. 2004;27:596-601.

Dosing Information for Common Antipsychotic Medications

In general, lower doses are sufficient with first episode psychosis.

Less metabolic effects

• Aripiprazole* (Abilify™)	Child: Start 2.5 mg daily, up to 15 mg daily Adol/adult: Start 5 mg daily, initial target 5-15 mg daily, max 30 mg daily
• Lurasidone (Latuda™)	Adolescent: Start 20-40 mg daily, increase by 20 mg daily every 2-7 days; up to 80-120 mg daily Child: Start 10-20 mg daily, increase by 10 mg daily every 2-7 days; up to 40-60 mg daily
• Ziprasidone (Geodon™)	Child: Unknown Adol/adult: Start 20 mg daily, initial target 20-40 mg daily, max 160-180 mg in adults
More metabolic effects	
• Risperidone (Risperdal™)	Start at 0.25-0.5 mg daily Target 0.25-10 mg/kg/day or 1-4 mg daily Doses of less than 3 mg have been shown optimal in first-episode cases Dosing is typically bid or tid; available in oral solution and orally disintegrating tablets
• Olanzapine (Zyprexa™)	Start 2.5-5 mg daily Increase 2.5-5 mg daily in weekly intervals up to target dosage Initial therapeutic target 10 mg daily Max 20 mg daily Available in orally disintegrating tablets (Zydis) Compared to Risperidone, lower risk of motor side effects and elevated prolactin but higher risk of sedation and weight gain
• Quetiapine (Seroquel™)	Dosing for schizophrenia in adolescents is below, from the monograph. Immediate-release tablet (IR): Day 1: 25 mg twice daily Day 2: 50 mg twice daily Day 3: 100 mg twice daily Day 4: 150 mg twice daily Day 5: 200 mg twice daily target dosage Usual dosage range: 200 to 400 mg twice daily; maximum daily dose: 800 mg/day. Studies show no additional benefit was seen with 400 mg twice daily vs 200 mg twice daily. Extended-release tablet (XL): Day 1: 50 mg once daily Day 2: 100 mg once daily Day 3: 200 mg daily Day 4: 300 mg daily Day 5: 400 mg once daily Usual dosage range: 400 to 800 mg once daily; maximum daily dose: 800 mg/day. Ophthalmologic monitoring for cataracts no longer felt necessary in most cases.
Persistent psychosis despite other antipsychotics?	
• Clozapine (Clozaril™)	Start at 12.5 mg daily Target 25-800 mg daily For treatment resistant psychosis when other options have failed Required weekly blood count for first six months and then every other week, reporting to the National Clozapine Registry

Looking for more information about antipsychotic medication?

- View our Antipsychotic Medication Table

Medications for Anxiety / Major Depressive Symptoms

- Use antidepressant medication such as SSRI

Fluoxetine (Prozac)	Child: Start 5 mg daily; target 10-20 mg daily Youth: Start 5-10 mg daily; target 10-60 mg daily; max 60-80 mg daily
Escitalopram (Cipralex or generic)	Child: Start 5-10 mg daily; target 10-40 mg daily Youth: Start 10 mg daily; target 10-40 mg daily for most; maximum 60 mg daily
Sertraline (Zoloft or generic)	Child: Start 25 mg daily; target 50-200 mg daily Youth: Start 50 mg daily; increase by 50 mg/day every 2-weeks until satisfactory clinical response or maximal dosage; target 50-200 mg daily Maximum 200 mg daily
Fluvoxamine (Luvox or generic)	Child: Start 25 mg daily; target 25-200 mg daily Youth: Start 25-50 mg daily; target 50-300 mg daily
Paroxetine (Paxil or generic)	Child: Start 5 mg daily; target 5-40 mg daily Youth: Start 10 mg daily; target 25-200 mg daily Not usually used in children/youth due to having short half-life

Looking for more information about antidepressant medications? View our SSRI Medication Table.

When and Where to Refer

Is the patient presenting with first episode psychosis?

- Referred to the specialized mental health services (e.g. the local early intervention service or first episode clinic).
- Treated for any underlying medical conditions that are contributing to the psychosis.
- Referred to specialty services or even emergency department depending on what underlying medical causes might be suspected
    - E.g. urgent neurological consult if NMDA receptor encephalitis suspected

Does the student require a specialized program?

- Refer to a specialized or therapeutic school environment -- this is usually done by the school.

Does the patient already have a diagnosis of psychosis?

- Many patients with a stable diagnosis of psychosis are followed in primary care.
- However, consider a referral to specialty services if there is a change such as:
    - Poor response to treatment;
    - Nonadherence to treatment;
    - Intolerable side effects with current medication treatment;
    - Comorbid substance use problems;
    - Risk to self or others.
    - Worsening of symptoms.

Does the patient require other supports?

- Psychologist
    - Psychoeducational and neuropsychological testing to look for cognitive deficits, learning styles, strengths and weaknesses to be repeated once stabilized and used for school/work planning.
    - Psychological testing to clarify diagnosis if needed: if substances, pervasive developmental disorders, OCD, mood disorders, personality disorders also suspected
- Allied health referrals
    - Occupational therapy (OT): Can help with scholastic/vocational re-entry

    - Social work (SW): Can help with family support, housing, financial disability supports, liason with schools/work
    - Dietician: Can help if there are problems with appetite increase or weight gain, common with antipsychotic medications
- Local Support Groups for Psychosis/Schizophrenia
    - In Canada, there is the Schizophrenia Society of Canada, which has branch societies throughout all provinces and many cities

References

Nasrallah H: Recognizing and managing psychotic and mood disorders in primary care, J. Family Practice, 2008.

About this Document

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