Pharmacologic Management of Psychosis in the Primary Care Setting

Lorna Francis,CRNP-PMH

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Learning Objectives

By the end of this continuing education activity, participants will be able to

- Compare and contrast first- and second-generation antipsychotic medications based on pharmacologic mechanisms, clinical effectiveness, and adverse effect profiles relevant to outpatient psychosis management.
- Integrate patient-specific clinical factors including symptom severity, psychiatric and medical comorbidities, adherence risk, and metabolic vulnerability to optimize individualized antipsychotic treatment selection.
- Apply evidence-based prescribing, titration, and monitoring strategies to enhance medication safety, manage adverse effects, and support long-term metabolic and neurologic health outcomes in outpatient populations.

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Psychosis: Definition

Psychosis, as defined in clinical practice, is a syndrome marked by irregularities in at least one of five core areas:

- Delusions-false belief Ex. Believes coworkers are plotting to harm them.
- Hallucinations-false perception Ex. Hears voices when no one is present
- Disorganized thought (speech) Ex. Speech jumps between unrelated topics.
- Grossly Disorganized Behavior – Abnormal behavior/motor activity Ex. Wanders aimlessly or catatonia.
- Negative Symptoms – Reduced expression/motivation Ex. Flat affect, little speech, and lack of initiative.

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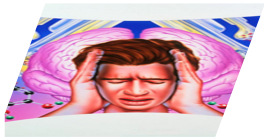
Symptom Categories



Positive symptoms: Delusions, Hallucinations,(auditory, visual, olfactory, gustatory and tactile), and disorganized thinking/behavior.

Negative symptoms: Reduced emotional and motivational functioning

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Causes of Psychosis

- First-episode psychotic disorder
- Substance-induced (cocaine, amphetamines, cannabis, hallucinogens)
- Exacerbation of schizophrenia or mood disorders
- Medical/neurologic triggers (infection, hypoxia, metabolic disturbances, steroid induced)

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Psychotic Disorder: Assessment

- Psychiatric history: symptom onset, progression, stressors
- Mental status exam: thought content, perception, affect
- Rule out secondary causes: substance, medical
- Functional assessment: social, occupational, self-care

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Psychotic Disorder: Risk Factors

- Genetic: family history of schizophrenia/bipolar
- Neurodevelopmental: perinatal complications, early cognitive deficits
- Environmental: trauma, social stressors, urban living

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Key Comparisons

Disorder	Duration	Psychosis	Mood Relationship	Key Point
Brief Psychotic	1 day <1 month	Yes	±	Sudden + full recovery
Schizophreniform	1-6 months	Yes	Minimal	Intermediate phase
Schizophrenia	>6 months	Yes	Not primary	Chronic and functional decline
Schizoaffective	Chronic	Yes	Independent psychosis ≥2 weeks	Psychosis outside mood episode
Delusional	≥1 month	Delusions only	Minimal	No major impairment or disorganization
Mood w/ Psychotic features	Episode-based	Yes	Only during mood episodes	Mood drives symptoms
Postpartum Depression	≤4 weeks	±	Primary	After childbirth
Postpartum Psychosis	Days-2 weeks	Yes	Severe	Emergency

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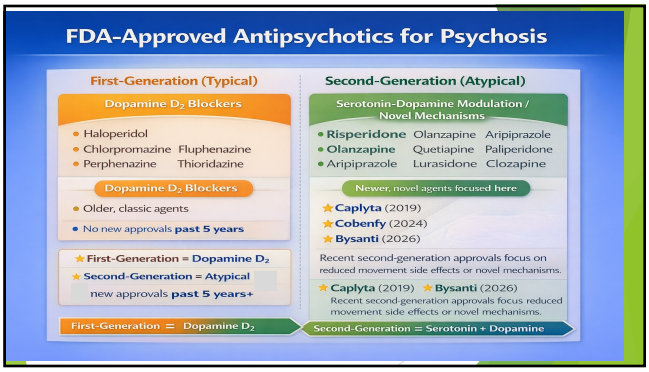
FDA-Approved Antipsychotics for Psychosis



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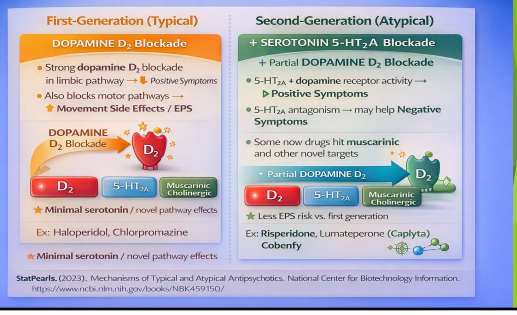
Mechanisms of Action: Antipsychotics



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Delirium

Delirium is an acute disturbance in attention, cognition, and awareness that fluctuates over time. Delirium is characterized by three subtypes: hyperactive, hypoactive, and mixed.

Causes:

- UTI, pneumonia, sepsis, Hypoxia or metabolic imbalance.
- Medications: anticholinergics, opioids, steroids
- Alcohol/benzodiazepine withdrawal
- Renal/hepatic failure

No medications are approved by the U.S. Food and Drug Administration for the treatment of delirium. If pharmacologic therapy is indicated, second-generation antipsychotics such as olanzapine, risperidone, and quetiapine are preferred over haloperidol because of their faster onset of action and fewer adverse effects. Patients hospitalized with prolonged delirium have approximately three times the chance of dying in the following year compared with patients with a quick resolution of delirium or no symptoms; therefore, prevention and early detection should be emphasized.

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Medical Delirium: Assessment & Treatment

- Identify acute cognitive changes, labs, vitals, neuro exam
- Treat underlying medical condition (primary treatment)
- Supportive care: reorientation, sleep/wake regulation, hydration
- Antipsychotics only adjunctive: quetiapine, risperidone low-dose haloperidol
- Antipsychotics control behavior but do not treat delirium

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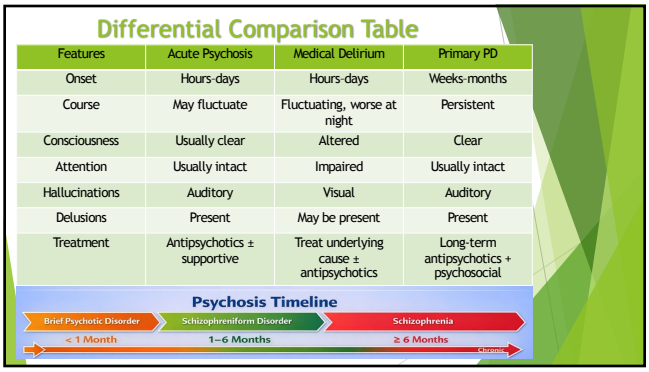
Differential Comparison Table

Features	Acute Psychosis	Medical Delirium	Primary PD
Onset	Hours-days	Hours-days	Weeks-months
Course	May fluctuate	Fluctuating, worse at night	Persistent
Consciousness	Usually clear	Altered	Clear
Attention	Usually intact	Impaired	Usually intact
Hallucinations	Auditory	Visual	Auditory
Delusions	Present	May be present	Present
Treatment	Antipsychotics ± supportive	Treat underlying cause ± antipsychotics	Long-term antipsychotics + psychosocial



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Approach to Medication Selection

Symptom Severity Preferred	Severe positive symptoms → high-potency D_2 blockade; negative/cognitive symptoms → atypical
Psychiatric Comorbidities Substance use	Anxiety, depression → atypicals with serotonergic effects; long-acting injectables may help adherence
Medical Comorbidities Hepatic/renal	Cardiovascular disease → avoid high metabolic-risk agents; impairment → dose adjustments
Adherence Risk Schedules	Poor adherence → long-acting injectables, simpler dosing
Metabolic Vulnerability atypicals	Obesity, diabetes, dyslipidemia → choose lower-risk (aripiprazole, lurasidone, lumateperone)

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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			

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Mini-Mental State Examination (MMSE)

Purpose:
- Screen cognitive function
- Assess severity & progression of dementia
- Track changes over time

Cognitive Domains (30 points)

Orientation 10 pts	Registration 3 pts	Attention & Calculation 5 pts	Recall 3 pts	Language & Praxis 9 pts
Time & Place (year, date, city, etc.)	*Name 3 objects & repeat*	*Serial 7s or Spell "WORLD"*	*Recall 3 objects*	*Naming, Commands, Copying*
Place: country, state, city, building, floor				*Naming, Commands, Copying*

Score Interpretation

24–30 Normal | 18–23 Mild | 10–17 Moderate | <10 Severe

Tips:
- Consider education & culture
- Screening tool – Further evaluation needed

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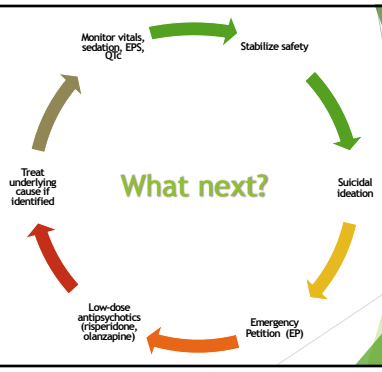
What next?



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When do you refer out?

- After medication trial without success
- Worsening symptoms (hallucinations, mania).
- PHQ9 score
- Columbia Suicide Severity Rating Scale (C-SSRS) score

The Columbia Suicide Severity Rating Scale (C-SSRS) is a short questionnaire that can be administered quickly in the field by responders with no formal mental health training, and it is relevant in a wide range of settings and for individuals of all ages.

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Columbia Scale

Always ask questions 1 and 2.	Past Month
1) Have you wished you were dead or wished you could go to sleep and not wake up?	
2) Have you actually had any thoughts about killing yourself?	
If YES to 2, ask questions 3, 4, 5 and 6. If NO to 2, skip to question 6.	
3) Have you been thinking about how you might do this?	
4) Have you had these thoughts and had some intention of acting on them?	High Risk
5) Have you started to work out or worked out the details of how to kill yourself? Did you intend to carry out this plan?	High Risk
Always Ask Question 6	**Life-time / Past 3 Months**
6) Have you done anything, started to do anything, or prepared to do anything to end your life? *Examples:* Took pills, tried to shoot yourself, cut yourself, tried to hang yourself, collected pills, got a gun, gave away valuables, wrote a will or suicide note, took out pills but didn't swallow any, held a gun but changed your mind or it was grabbed from your hand, went to the roof but didn't jump, etc. **If yes, was this within the past 3 months?**	High Risk

988 SUICIDE & CRISIS LIFELINE

If YES to 2 or 3, seek behavioral healthcare for further evaluation. If the answer to 4, 5 or 6 is YES, get immediate help: Call or text 988, call 911 or go to the emergency room. STAY WITH THEM until they can be evaluated.

Download Columbia Protocol app

Substance Abuse and Mental Health Services Administration. (2023). *Mental health and substance use disorders.* https://www.samhsa.gov/mental-health

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Outpatient assessment

- Interview - Assess positive symptoms: delusions, hallucinations, disorganized speech/behavior
- Assess negative symptoms: flat affect, avolition, social withdrawal
- Determine onset, duration, and progression of symptoms
- Evaluate level of insight into abnormal experiences, safety
- Rule out medical causes
- Mental Status Examination (MSE)
- PHQ9, CCSR
- Risk Assessment Suicidal ideation (passive vs. active)Homicidal ideation, Command hallucinations.
- Ability to care for self or risk of harm to others

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Psychiatric Providers

- Prescribing & Titration :Start low, go slow; adjust based on response and tolerability
  - Gradual dose titration; weekly assessment initially
    - Monitoring:Neurologic: AIMS every 6-12 months; EPS, TD, akathisia
- Long-Term Outcomes:Minimize EPS and TD Reduce metabolic morbidity
  - Other labs: CBC (clozapine), LFTs, renal, ECG if indicated
    - Metabolic: Weight, BMI, waist circumference, glucose, lipids: baseline + periodic
- Support adherence via patient education
  - Haloperidol decanoate – q4wk
    Fluphenazine decanoate – q2-4wk
    Risperidone microspheres – q2wk (OL)
    - Paliperidone palmitate – q4wk (no OL after load)
      Aripiprazole monohydrate – q4wk (OL) Aripiprazole lauroxil – q4-8wk

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Quick Reference

- USE WHAT HAS WORKED PREVIOUSLY START LOW, GO SLOW, CONSIDER SIDE EFFECTS + ADHERENCE (LAI IF NEEDED)
- ARIPIPRAZOLE (ABILIFY)
  - START 2-5 MG (UP TO 10 MG)
  - BEST FOR MOOD, LOWER METABOLIC RISK
  - RISKS: AKATHISIA, IMPULSE CONTROL
- RISPERIDONE / PALIPERIDONE (INVEGA)
  - STRONG FOR PSYCHOSIS, LAI AVAILABLE
  - RISK: HYPERPROLACTINEMIA
  - >4 MG/DAY → MORE SIDE EFFECTS, LITTLE ADDED BENEFIT
- OLANZAPINE (ZYPREXA)
  - VERY EFFECTIVE
  - HIGH METABOLIC RISK
  - LOWER EPS
- LURASIDONE (LATUDA)
  - BIPOLAR DEPRESSION
  - LOWER METABOLIC RISK
  - MUST TAKE WITH FOOD
- QUETIAPINE (SEROQUEL)
  - <200 MG: SEDATION
  - ≥300 MG: MOOD EFFECTS
- NEWER: CAPLYTA, VRAYLAR
  - LOWER METABOLIC/EPS RISK; BIPOLAR & NEGATIVE SYMPTOMS
- SAFETY
  - (BLOCK BOX WARNING): MORTALITY IN ELDERLY DEMENTIA
  - CAUTION: PARKINSON'S
  - MONITOR: WEIGHT, GLUCOSE, LIPIDS, EPS, PROLACTIN

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Level of Care Determination

- Determine whether outpatient management is appropriate or if emergency evaluation or hospitalization is required
- PHQ9 score
- MMSE score
- Emergency petition

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☐ CIRCUIT COURT ☐ DISTRICT COURT OF MARYLAND FOR _____ City/County

Located at _____ Case No. _____

In the Matter of _____

PETITION FOR EMERGENCY EVALUATION
(Maryland Code, Health General Article § 10-620 et seq.)

The petitioner, _____, requests that this court order an emergency evaluation of _____ and in support of this petition states as follows:
Name of Petitioner
Name of Person to be Evaluated (Evaluee)

1. Petitioner: Address _____
Cell Phone/Pager # _____ Home Phone _____ Work Phone _____
If petitioner is a physician, psychologist, clinical social worker, licensed clinical professional counselor, clinical nurse specialist in psychiatric and mental health nursing, psychiatric nurse practitioner, licensed clinical marriage and family therapist, or health officer or designee of a health officer who has examined the evaluee, then the petitioner's specialty is _____ and the petitioner's license number is _____.
Petitioner's relationship or interest in evaluee _____
2. Evaluee: Address _____ DOB _____
Sex _____ Race _____ Ht _____ Wt _____ Hair _____ Eyes _____ Complexion _____
Other _____
3. If not petitioner, name of spouse, child, parent, or other relative, or other individual interested in the evaluee:
Name _____ Relationship _____
Address _____
Home Phone _____ Work Phone _____
4. A petition for emergency evaluation of the evaluee was filed previously on _____ Date
and was ☐ granted ☐ denied.
5. The evaluee has been hospitalized in the past at the following facilities:
When / Where / Diagnosis
_____ _____ _____
_____ _____ _____
6. The evaluee currently is receiving psychiatric treatment from:
Name / Address / Phone
_____ _____ _____
_____ _____ _____
7. The evaluee has been prescribed the following medication for their mental disorder:
_____
8. The evaluee ☐ is ☐ is **not** taking the medication as prescribed **OR** ☐ I do not know whether the evaluee is taking the medication as prescribed.
9. The evaluee is demonstrating the following behavior that leads me to conclude that they currently have a mental disorder: _____
(Attach additional sheets if necessary)
10. The evaluee presents a danger to the life or safety of the evaluee or others because: _____
(Attach additional sheets if necessary)
11. The evaluee has access to the following firearms/weapons: _____
I solemnly affirm under the penalties of perjury that the contents of this document are true to the best of my knowledge, information, and belief.

_____ _____
Date / Petitioner

_____ _____
Date / Witness

TO THE PETITIONER: You may be required to appear before the court. You have made the arrangements above under penalties of perjury. If no evaluation is ordered, it would be helpful if you could accompany the evaluee to the emergency facility and provide emergency facility authorities with all information that is pertinent to this petition. A petitioner who, in good faith and with reasonable grounds, submits or completes the Petition for Emergency Evaluation is not civilly or criminally liable for submitting or completing the petition.

CC-DC-013 (Rev. 12/09/2020) (Front) **Reset** PEEV

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A. Duties of Peace Officer
1. Caution to Petitioner. A peace officer shall explain to a physician, psychologist, clinical social worker, licensed clinical professional counselor, clinical nurse specialist in psychiatric and mental health nursing, psychiatric nurse practitioner, a licensed clinical marriage and family therapist, or a health officer or designee of a health officer, who presents a petition to the peace officer:
   a. the serious nature of the petition; and
   b. the meaning and content of the petition.
2. Delivery to Facility. To the extent practicable, a peace officer shall notify the emergency facility in advance that the officer is bringing an evaluee to the emergency facility for evaluation. A peace officer shall bring an evaluee to the nearest emergency facility if the officer has a petition that:
   a. has been endorsed by a court within the last five (5) days; or
   b. is signed and submitted by a physician, psychologist, clinical social worker, licensed clinical professional counselor, clinical nurse specialist in psychiatric and mental health nursing, psychiatric nurse practitioner, a licensed clinical marriage and family therapist, or a health officer or designee of a health officer, or peace officer.
3. Documentation of Delivery. A peace officer shall complete a Return of Service by Peace Officer form (CC-DC-027) and have an agent for the emergency facility sign the form.
4. Remaining with Evaluee.
   a. After a peace officer brings an evaluee to an emergency facility, the officer need not stay unless, because the evaluee is violent, emergency facility personnel ask the supervisor of the peace officer to have the peace officer remain.
   b. A peace officer shall stay if the officer's supervisor responds to the request for assistance.
5. Return of Service. A peace officer shall file a completed Return of Service with the court issuing the Endorsement and, when practicable, shall do so before delivering an evaluee to an emergency facility or immediately after expiration of the five-day period for taking the evaluee into custody.

B. Duty of Supervisor. A supervisor shall allow a peace officer to stay with a violent evaluee.

C. Duties of Emergency Facility
1. Documentation of Delivery. An agent of the emergency facility shall sign the Return of Service by Peace Officer form completed by a peace officer transporting an evaluee to the emergency facility.
2. Examination. If emergency facility personnel ask that a peace officer stay, a physician shall examine the evaluee as promptly as possible to determine whether the evaluee meets the requirements for involuntary admission. The physician or designee shall examine an evaluee within six (6) hours after an officer brings the evaluee to the emergency facility.
3. Release or Admission. Promptly after an examination, an evaluee shall be released unless the evaluee:
   a. asks for voluntary admission; or
   b. meets the requirements for involuntary admission.
4. Detention Period. An emergency evaluee may not be kept at an emergency facility for more than thirty (30) hours.

CC-DC-013 (Rev. 12/09/2020) (back) PEEEV

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Key Clinical Pearls

- Always rule out delirium first
- Treat underlying medical causes, not just psychosis
- Antipsychotics control symptoms but do not cure delirium
- Early detection and psychosocial support improve outcomes

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References

American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). https://www.psychiatry.org/File%20Library/Psychiatrists/Practice/DSM/APA_DSM-5-Contents.pdf

Correll, C. U., et al. (2020). Evidence-based guidelines for antipsychotic use in adults. *Journal of Clinical Psychiatry, 81*(3). https://doi.org/10.4088/JCP.19r12917

Department of Veterans Affairs. (2023). *Management of first-episode psychosis and schizophrenia (SCZ).* https://www.publicsafetymedicine.org

Fabrazzo, M., Cipolla, S., Camerlengo, A., Perris, F., & Catapano, F. (2022). Second-generation antipsychotics' effectiveness and tolerability: A review of real-world studies in patients with schizophrenia and related disorders. *Journal of Clinical Medicine, 11*, XXXX. https://doi.org/10.3390/jcm XXXX

Hamina, A., Taipale, H., Lieslehto, J., et al. (2024). Comparative effectiveness of antipsychotics in patients with schizophrenia spectrum disorder. *JAMA Network Open, 7*, XXXX. https://doi.org/10.1001/jamanetworkopen.2024.XXXX

Jaqua, E. E., Nguyen, V. T. N., & Chin, E. (2023, September). Delirium in older persons: Prevention, evaluation, and management. *American Family Physician, 108*(3), 278-287. https://pubmed.ncbi.nlm.nih.gov/37725462/

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References

Medscape. (2024). *Schizophrenia: Background, diagnostic criteria (DSM-5 TR).* https://emedicine.medscape.com/article/288429-overview

National Center for Biotechnology Information. (2023). *Brief psychotic disorder.* https://www.ncbi.nlm.nih.gov/books/NBK539917/

NAMI Maryland. (n.d.). *Emergency petitions.* https://namimd.org/get-help-and-support/crisis-help/emergency-petitions/

Patel, P., & Saadabadi, A. (2026). Neuroleptic medications. In *StatPearls*. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK459150/

Perry, A. (2021). Phenomenology, epidemiology and aetiology of postpartum psychoses. *Brain Sciences, 11*(1), 47. https://doi.org/10.3390/brainsci11010047

Public Safety Medicine. (2023). *Schizophrenia spectrum and other psychotic disorders.* https://www.publicsafetymedicine.org

Stahl, S. M. (2023). *Stahl's essential psychopharmacology: Neuroscientific basis and practical applications* (5th ed.). Cambridge University Press.

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References

Substance Abuse and Mental Health Services Administration. (2023). *Mental health and substance use disorders.* https://www.samhsa.gov/mental-health

Therapedia. (2025). *Schizophreniform disorder: DSM-5 criteria.* https://www.theravive.com/therapedia/schizophreniform-disorder-dsm--5-295.40

Wikipedia contributors. (2026, March 1). *Postpartum psychosis.* https://en.wikipedia.org/wiki/Postpartum_psychosis

Willner, K., Vasan, S., Patel, P., et al. (2026). Atypical antipsychotic agents. In *StatPearls*. StatPearls Publishing. https://www.ncbi.nlm.nih.gov/sites/books/NBK448156/

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Resources

The First Episode Clinic (FEC), part of the University of Maryland, Maryland Psychiatric Research Center (MPRC), and the Maryland Early Intervention Program (MEIP), provides state-of-the-art care to those ages 12 - 35 who are within the first two years of experiencing psychosis.

The goal of EPIC is to provide individuals experiencing an initial psychotic episode with accurate diagnosis and treatment for his or her illness. Licensed clinicans and psychiatrists provide comprehensive and immediate treatment in order to stabilize and reduce psychotic symptoms.

Early Psychosis Intervention Clinic
Community Psychiatry Program
Johns Hopkins Bayview Medical Center
4940 Eastern Avenue, Baltimore, MD 21224

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Resources

Baltimore City:
Baltimore Crisis Response Center
5124 Greenwich Ave, Baltimore, MD 21229
410-433-5175
BCRI (bcresponse.org)
Baltimore County:
Baltimore County Crisis Response - Sante
410.931.2214
Crisis Response and Intervention - Santé Baltimore County (santebaltimorecounty.org)
Sheppard Pratt
6501 N. Charles Street • Baltimore, MD 21204
410-938-5302
https://www.sheppardpratt.org/care-finder/psychiatric-urgent-care/

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Calvert County:
Crisis Intervention Center
410.257.2216
https://www.ccbhcrisisresponse.org/
Pathways
Prince Frederick: 301.373.3065 Ext 241
Charles County:
Charles County Department of Health
4545 Crain Highway
White Plains, MD 20695
Phone: 301-609-6900
https://www.charlescountyhealth.org/mental-health-services-2/
Pathways
Waldorf: 301.373.3065 Ext 310

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Frederick County:
Mental Health Association Walk-In Crisis Care Center
340 Montevue Lane, Frederick, MD 21702
301-663-0011
https://fcmha.org/how-we-help/behavioral-health/
Harford County:
Klein Family Center
802 Baltimore Pike
Bel Air, MD 21014
410-874-0711
https://www.umms.org/uch/locations/klein-family-center
Montgomery County:
MidCounty DHHS Building
1301 Piccard Drive,
Rockville, MD 20850
240-777-4000
https://montgomerycountymd.gov/HHS-Program/Program.aspx?id=BB%C5%7BB%C574hrcrisiscenter-p204.html

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Prince George's County
Pathways
Upper Marlboro: 240.339.1306
https://www.pathwaysinc.org/
St. Mary's County:
Pathways
Hollywood: 301.373.3065 Ext 241
https://www.pathwaysinc.org/
Talbot County:
Mid Shore Behavioral Health
28578 Mary's Court, Suite 1
Easton, Maryland 21601
410-770-4801
https://midshorebehavioralhealth.org/crisis-services/
For All Seasons:
300 Talbot St. Easton, MD
8221 Teal Dr., Suite 427, Easton, MD
410-822-1018
https://forallseasonsinc.org/what-we-do-how-we-help/psychiatric-care/

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