



Schizophrenia Management Protocol

All Team Members: Patient self-management education & support

Schizophrenia is a mental health condition in which patients have impaired thinking, emotions, and behavior. It is a psychotic disorder, meaning that patients experience a very altered reality. They may experience hallucinations (hearing, seeing or experiencing something that is not there) and delusions (false beliefs). Patients may withdraw from society and may not follow normal social patterns (such as good hygiene).

Quit smoking and using drugs. Limit alcohol.	Smoking increases the risk of cancer and heart disease. It also affects how your body metabolizes psychiatric medicines. This means that the drugs used to treat schizophrenia may not be able to reach a level where the benefits will occur. Drugs like meth and cocaine can increase paranoia and other delusional thinking, and can worsen hallucinations. Support your patients to quit.
Monitor dietary intake	Atypical antipsychotic medications can increase the risk of weight gain, high blood pressure, diabetes, and high cholesterol. Encourage patients to eat more vegetables, fruits, unrefined whole grains, and fish—while reducing fatty meats, trans fats, sugary drinks, and salt.
Encourage physical activity	Encourage daily exercise, such as walking, for at least 30min.
Take medications as directed	Patient will usually be prescribed: <ul style="list-style-type: none">- Antipsychotic medicine: These are “typical” or “atypical” depending on how the medicine works Assess medication noncompliance with questions such as, “How many missed doses have you had in the last 2 weeks?” Explore barriers to regular use of medication, including side effects, stigma, etc.

Educate the patient about warning signs of worsening symptoms and when to call the team including:

ECHO Access Schizophrenia Management Protocol

- increased tension, nervousness
- trouble sleeping
- increased depression
- no desire to spend time with other people
- worsening hygiene
- increased violence/aggression
- increased alcohol/substance use
- ideas of reference [delusions that other people’s conversations or behavior pertain directly to you—can range from giggling (you assume they are laughing at you) all the way to misperceptions that TV or radio is speaking specifically and directly to you.
- hallucinations- seeing or experiencing something others don’t seem to see/experience
- paranoia – feeling that other people are against you or are monitoring your actions
- being told that your speech doesn’t make sense
- being told that you are acting strangely

NP

Every visit	As appropriate/needed:
A. Evaluate psychotic symptoms.	
B. Address comorbid psychiatric concerns.	
C. Evaluate side effects.	F. Labs, metabolic syndrome monitoring. (see G. 1. below) G. Abnormal Involuntary Movement Scale (AIMS). (see H below)
D. Medication reconciliation and management.	
E. Review use of substances.	
F. Review diet/exercise plan.	

- A. Evaluate psychotic symptoms.
 1. Criterion A symptoms (Schizophrenia) include:
 - a. delusions
 - b. hallucinations
 - c. disorganized speech
 - d. disorganized/catatonic behavior
 - e. negative symptoms [such as blunted affect, poverty of speech, social isolation, lack of motivation]
 - a.
 2. Regular safety screening (i.e., suicidal ideation, homicidal ideation, ability to continue attending to self-care).

ECHO Access Schizophrenia Management Protocol

- a. Document risk assessment (low/med/high risk), considered factors.
 - b. If there is a high acute risk:
 1. consider stepping-up level of care (e.g., transfer to emergency room or inpatient psychiatry)
 2. determine if there are sufficient criteria for an involuntary commitment
 3. depending on statutory and case law pertinent to your jurisdiction, consider if there is a duty to warn others and/or law enforcement (in cases of safety threat to other individuals, identified or general)
 4. consider available interventions to reduce access to means for self-harm or harm against others (e.g., involving family to remove firearms or stockpiled Rxs)
 5. if the patient is not in the clinic and there is a perceived high acute risk, consider:
 - a. dispatching police for a welfare check
 - b. dispatching a mobile crisis mental health team for a field evaluation
 - c. Prioritize A.4, below, in high-risk situations.
 1. In some jurisdictions, under emergency circumstances, it may be legally permissible to gather collateral even without patient consent, to formulate a response plan.
3. Gather input from other providers (particularly case managers), family/social circle (if patient consents).
 4. For first presentations, collect recent hospital discharge summaries from inpatient psychiatry.
 5. Present patient to Project ECHO clinic if:
 - a. This is a new diagnosis or you are unsure of diagnosis.
 - b. Patient is not responding to antipsychotic medication within an adequate trial of at least 1 month.
 - c. Patient's psychiatric presentation or medical issues are presenting acute concerns.
 - d. Patient is not sufficiently engaging in treatment plan or with treatment providers.
 - e. You have any questions about patient management.
- B. Address comorbid psychiatric concerns.
1. Accompanying mood symptoms should prompt reconsideration of psychiatric diagnosis.
 - a. Psychotic symptoms only within the context of an episode of depression or mania suggests Major Depressive Disorder with psychotic features or Bipolar Disorder with psychotic features.
 - b. Psychotic symptoms that largely (but do not perfectly) track depressive or manic symptoms suggests Schizoaffective Disorder.
 1. Schizoaffective Disorder requires at least 2 weeks of psychotic symptoms outside of an acute episode of depression or mania.
 2. Anxiety and PTSD symptoms
- C. Evaluate side effects.
1. extrapyramidal
 - a. check for extrapyramidal symptoms (EPS) see b. below for examples
 1. Q-6 months (on typicals)
 2. Q-12 months (on atypicals)
 3. Double frequency for at-risk populations (e.g., elderly, African Americans, Asians)

ECHO Access Schizophrenia Management Protocol

- b. can include:
 - 1. dystonia → rescue with benztropine or diphenhydramine
 - 2. parkinsonism → alleviate with benztropine or diphenhydramine
 - 3. akathisia → alleviate with low-dose propranolol
 - 4. tardive dyskinesia (TD)
 - a. (see AIMS below, Item H)
 - 5. neuroleptic malignant syndrome [fever, autonomic dysregulation, rigidity, granulocytosis, orientation changes—the most extreme form of EPS, and potentially life-threatening]
 - a. requires immediate cessation of all antipsychotic agents and inpatient care (medical ICU)
 - 2. cardiovascular
 - a. examples include:
 - 1. isolated tachycardia (risperidone)
 - 2. orthostasis (multiple antipsychotic agents)
 - b. if appropriate, consider an EKG.
 - 1. with cardiovascular complaints
 - 2. with concurrent medications that may synergize with antipsychotic to prolong QTc
 - 3. safety concerns increase at QTc ≥500 msec
 - 3. metabolic
 - a. can include:
 - 1. weight
 - 2. blood pressure
 - 3. glycemic dysregulation
 - 4. dyslipidemia
 - b. consider:
 - 1. use of a less metabolically burdensome atypical antipsychotic
 - 2. use of a typical antipsychotic
 - 3. adjunctive metformin use
 - 4. Hormonal
 - a. Hyperprolactinemia
 - 1. Elevated serum prolactin concentration
 - 2. Galactorrhea (nipple discharge)
 - 3. Amenorrhea
 - 4. Decreased libido
 - b. Consider
 - 1. Change of agent
 - 2. Lowering dose
 - c. Most commonly seen with
 - 1. Risperidone
 - 2. High-potency typical antipsychotics (e.g. haloperidol, fluphenazine)
- D. Medication reconciliation and management.
- 1. first-line agents
 - a. among atypical antipsychotics include:
 - 1. generics

ECHO Access Schizophrenia Management Protocol

- a. risperidone
- b. quetiapine
 - i. minimum effective dose of 400 mg PO daily, though titration must be step-wise, beginning at no greater than 100 mg PO daily
- c. olanzapine
2. brand-name (these are lower metabolic burden)
 - a. aripiprazole (ABILIFY)
 - b. ziprasidone (GEODON)
 - i. must be dosed with concurrent food intake, otherwise only 20% is absorbed
- b. among typical antipsychotics include:
 1. loxapine
 2. haloperidol
 3. perphenazine
 4. fluphenazine
 5. chlorpromazine
2. In case of persistent medication non-adherence, consider use of depot medication:
 - a. First give patient a PO trial of corresponding antipsychotic to ensure the agent is well-tolerated.
 1. Examples:
 - a. IM Risperdal Consta or IM Invega Sustenna
 - b. IM haloperidol decanoate
 - c. IM fluphenazine decanoate
3. In case of refractory psychosis (i.e., 2-5 failed Rx trials) and confirmed Rx adherence, consider:
 - a. clozapine
 1. requires patient entry into national clozapine registry
 2. 1st 6mos: Q-week CBC with differential to monitor absolute neutrophil count (ANC)
 3. 2nd 6mos: Q-2week CBC with differential (also for ANC)
 4. thereafter: Q-month CBC with differential (for ANC)
 5. for WBC <3500 or ANC <2000, refer to national clozapine registry guidelines for changes to monitoring schedule:
<https://www.clozapineregistry.com/Table1.pdf.ashx>

ANTIPSYCHOTIC COMPARISON TABLE

NAME OF DRUG	Clinical Caveats	Drug-specific Side-effects
Risperidone	Effective at low doses	Orthostatic hypotension, galactorrhea, highest risk of EPS with atypicals
Olanzapine	Effective at low doses	Metabolic abnormalities
Quetiapine	Compliance is LOWEST with this drug in schizophrenia	Significant sedation, metabolic abnormalities
Ziprasidone	Least weight gain, must be taken with food in order to absorb, best if taken BID	
Aripiprazole	Least effective for acute psychosis	Can be activating (dose

ECHO Access Schizophrenia Management Protocol

		in AM)
Haldol	Effective at low doses	High risk of EPS, TD
Chlorpromazine	Better tolerated in children compared to adults. Low risk of EPS.	Sedation, orthostatic hypotension and fall risk in adults
Fluphenazine	Effective at low doses	Risk of EPS, TD
Clozapine	Treatment of choice for treatment resistant schizophrenia. Compliance is HIGHEST with this drug compared to other antipsychotics	Risk of agranulocytosis, endocarditis. Requires regular CBCs in order to fill prescription.

E. Review use of substances of abuse.

1. Curb alcohol use.
2. Refer to smoking cessation classes/hotline as appropriate/available.
 - a. Bupropion, varenicline may be problematic in patients with psychotic disorders.
 1. May exacerbate psychosis or aggressive behavior
 2. NOT an absolute contraindication, but alternative agents may still be preferable
3. Curb/eliminate cannabis and stimulant use (these worsen psychosis).
4. Likewise for hallucinogens.

F. Review diet/exercise plan.

1. The American Heart Association (AHA) has eliminated “Step I” and “Step II” designations to prior dietary recommendations, and has moved away from specifying calorie counts or component %’s to instead emphasize specific food suggestions.
2. Recommend as much adherence as possible to AHA guidelines, outlined at: [http://www.heart.org/HEARTORG/GettingHealthy/Diet-and-Lifestyle-Recommendations UCM_305855_Article.jsp](http://www.heart.org/HEARTORG/GettingHealthy/Diet-and-Lifestyle-Recommendations_UCM_305855_Article.jsp)
3. Daily exercise per universal table above and as discussed on above http link, too.

G. Labs and metabolic syndrome monitoring.

1. Initial labs.
 - a. CBC (with differential if using or considering clozapine)
 - b. Chemistry panel, including creatinine and fasting glucose
 - c. Liver function tests
 - d. Thyroid function tests
 - e. Syphilis serology
 - f. Pregnancy test (if reproductive-age female)
 - g. Urine or serum toxicology screen
 1. be aware of potential false positives, negatives
 2. consider use of gas chromatography / mass spectroscopy for confirmatory testing
 - h. HIV test
 - i. Hepatitis panel
2. Imaging.
 - a. Consider head CT or MR in cases of new-onset psychosis over age 30 or atypical clinical presentation.
3. Metabolic syndrome monitoring.

ECHO Access Schizophrenia Management Protocol

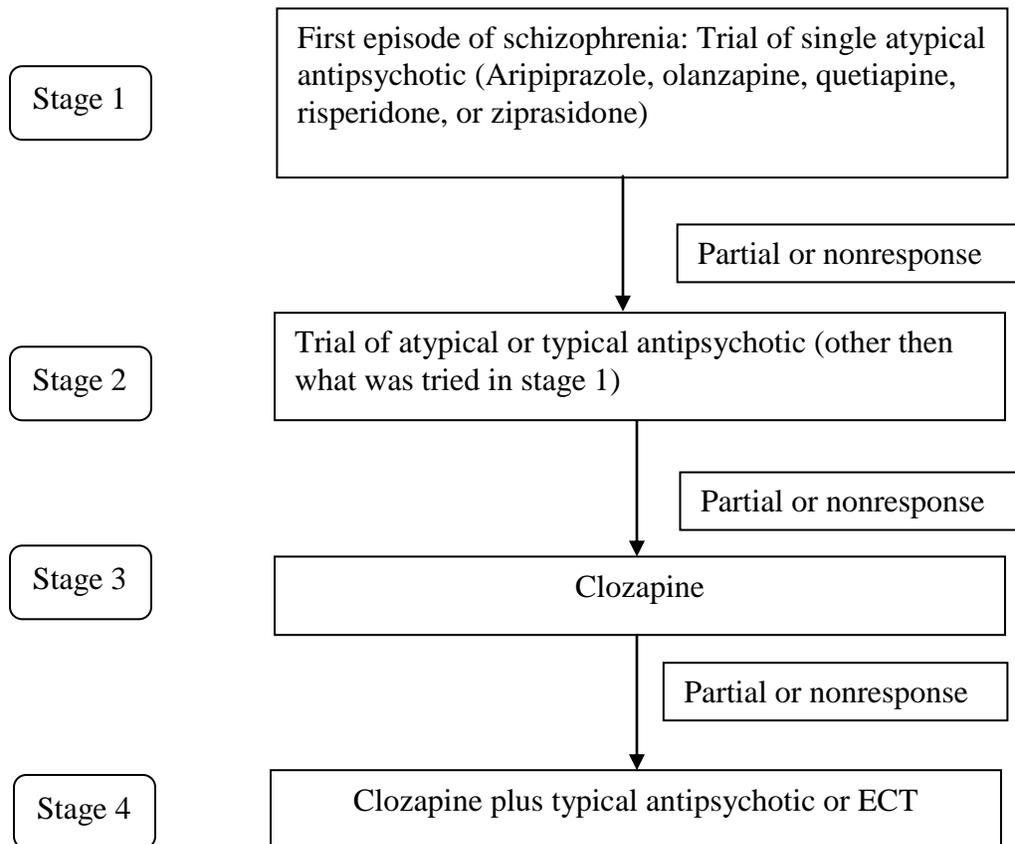
	Baseline	Week 4	Week 8	Week 12	Quarterly	Annually	Every 5 years
Weight/BMI	X	X	X	X	X		
Waist circumference	X					X	
Blood pressure	X					X	
A1c or fasting glucose	X					X	
Fasting lipids	X						X

H. Abnormal Involuntary Movement Scale.

1. indicated for evaluation of tardive dyskinesia (TD).
2. NOTE that the total score is not reported
 - a. A positive AIMS test consists of at least:
 1. 2 separate movements with a score of ≥ 2
 2. 1 movement with a score of ≥ 3
3. consider use of video capture (de-identified) to present to Project ECHO clinic if there are questions
4. approaches to consider to reduce TD:
 - a. dose reduction of antipsychotic
 1. would likely worsen TD acutely, but still preferable to dose increases
 - b. adjunctive therapies
 1. poor evidence base
 - c. alternative agent
 1. consider clozapine

ECHO Access Schizophrenia Management Protocol

SCHIZOPHRENIA TREATMENT ALGORITHM (Adapted from the Texas Medication Algorithm Project)



CHW & NP

A. See NP sections A-C and E-H above

B. Enhance patient's adaptation to life in the community.

C. Consider family interventions. Can include:

- Family psychoeducation
- Couples or family psychotherapy
- Referral to National Alliance for the Mentally Ill (NAMI)
- Referral to Al-anon (family support for patients with Alcohol Dependence)

D. Provide psychotherapy, which can take the form of:

- Supportive psychotherapy
 - Creating an atmosphere of safety for the patient
 - By avoiding interrogation, confrontation, direct interpretation
 - Bolstering existing defense mechanisms to prevent acute decompensation
 - Fostering verbal expression of thoughts, feelings
 - Provide practical strategies for coping, problem-solving

ECHO Access Schizophrenia Management Protocol

- Cognitive Behavioral Therapy (CBT) for psychosis
 - Engage in “collaborative empiricism”:
 - Explore advantages/disadvantages of delusions if true (v. false)
 - Develop joint exercises/experiments to safely test and confirm/disconfirm beliefs
 - Assign brief CBT homework assignments & review each visit.
 - If assignments are not completed, evaluate in-session obstacles or cognitive distortions the patient experienced and collaboratively problem-solve, anticipate issues that might continue to pose challenges.
- Motivational interviewing to improve:
 - Rx compliance
 - Attendance of clinical appointments
 - Sobriety from substances

CHW

- A. Review Rx list, and assess adherence / obstacles to adherence.
- B. Explore extent of substance use, and alert NP if use is new or increasing.
- C. Review diet, using guidelines in universal table at the top of this document. Consider use of food logs.
- D. Review weights and alert NP if weight has changed by ≥ 5 pounds between visits.
- E. Review vitals and alert NP if systolic blood pressure (the top number) is lower than 90 or higher than 140, or if heart rate is lower than 50 or higher than 95.
- F. Review patient’s basic understanding of the disease.
- G. Review patient’s self-management goals and motivation to continue with the treatment plan.
- H. Explore if any social pathways need to be added, revisited or updated.
 - Consider referrals to county/state agencies for Medicaid, other funding assistance (likewise for federal agencies—e.g., for SSI, SSDI, Medicare, etc.)
 - Consider referrals to subsidized housing.
 - Consider referrals to supported employment.

References

- Dixon L et al. Guideline Watch (Sept 2009): Practice guideline for the treatment of patients with schizophrenia. APA Practice Guidelines. ©2009, American Psychiatric Association.
<http://psychiatryonline.org/content.aspx?bookid=28§ionid=1682213>
- Hasnain M et al. Clinical monitoring and management of the metabolic syndrome in patients receiving atypical antipsychotic medications. Prim Care Diabetes 2009. 3:5-15.
- Lehman AF et al. Practice guideline for the treatment of patients with schizophrenia, 2nd ed. APA Practice Guidelines. ©2004, American Psychiatric Association.
<http://psychiatryonline.org/content.aspx?bookid=28§ionid=1665359>
- Tarrier N et al. Prodromal signs of relapse in schizophrenia. Soc Psychiatry Psychiatr Epidemiol 1991. 26:157–161

ECHO Access Schizophrenia Management Protocol

NP Psychosis Checklist / Visit Documentation

1. Interval psychosocial developments:

2. Status of psychotic symptoms:

subchronic chronic subchronic with acute exacerbation chronic with acute exacerbation in remission

3. Comorbid psychiatric concerns:

4. Medication reconciliation:

Prescribed:

Taking:

5. Medication side effects:

6. Interval substance use:

ECHO Access Schizophrenia Management Protocol

7. Diet / Exercise:

8. Review goals from last visit:

9. Formulate goals for next visit:

10. Labs (as appropriate):