❤️ Special Considerations for Medically Complex Patients

🫀 Psychiatric Management in Cardiovascular Disease

General Considerations

Cardiovascular disease (CVD) is common in psychiatric patients due to shared risk factors, lifestyle issues, and medication effects. Psychiatric symptoms may worsen cardiac outcomes, while cardiac conditions can exacerbate psychiatric symptoms.

High-Risk Medications in Cardiovascular Disease

- **Tricyclic Antidepressants (TCAs):** Can cause orthostatic hypotension, tachycardia, QTc prolongation, and conduction abnormalities • **Some Antipsychotics:** Particularly thioridazine, ziprasidone, and iloperidone can significantly prolong QTc
- **Stimulants:** Can increase blood pressure and heart rate; contraindicated in severe cardiovascular disease
- **Lithium:** Can cause sinus node dysfunction and T-wave changes
- **High-dose Citalopram/Escitalopram:** FDA warning for QTc prolongation at doses >40mg/20mg respectively
- **Venlafaxine:** Can increase blood pressure, particularly at higher doses

Preferred Medications in Cardiovascular Disease

- **SSRIs:** Sertraline has the most favorable cardiac profile among SSRIs
- **Bupropion:** Minimal cardiac effects at therapeutic doses, but contraindicated in acute cardiac conditions
- **Mirtazapine:** Minimal cardiac effects, but monitor for weight gain
- **Aripiprazole/Brexpiprazole:** Lower risk of QTc prolongation compared to other antipsychotics
- **Lurasidone:** Minimal effect on QTc interval

Specific Cardiovascular Conditions

Coronary Artery Disease	• Avoid TCAs • Caution with stimulants • Preferred: Sertraline, bupropion, mirtazapine	• Baseline ECG • Regular BP and HR monitoring • Monitor for angina with stimulants
Heart Failure	• Avoid medications that cause fluid retention • Caution with TCAs, carbamazepine • Lithium requires careful monitoring • Preferred: Sertraline, escitalopram	• Monitor weight for fluid retention • Check electrolytes regularly • Assess for edema • Monitor renal function

Arrhythmias	• Avoid QTc-prolonging medications • High-risk: TCAs, thioridazine, ziprasidone • Preferred: Sertraline, bupropion, aripiprazole	• Baseline and follow up ECGs • Regular electrolyte monitoring • Consider Holter monitoring if symptomatic
Hypertension	Avoid venlafaxine at • • higher doses Regular BP monitoring • Caution with stimulants, SNRIs • Preferred: SSRIs (except paroxetine),	mirtazapine • More frequent monitoring with stimulants or SNRIs • Home BP monitoring if possible
Recent MI or Stroke	• Avoid TCAs, MAOIs • Delay non-essential psychotropics if possible • Preferred: Sertraline (evidence in post-MI)	• Careful cardiac monitoring • Start at lower doses • Slower titration • Coordinate with cardiology

Cardiac Monitoring Recommendations

- **Baseline Assessment:**

- Comprehensive cardiac history
- ECG for all patients with cardiac disease or age >40 before starting high-risk medications
- Baseline BP, HR, weight
- Electrolytes, particularly potassium and magnesium

- **Follow-up Monitoring:**
  - BP and HR at each visit
  - ECG after reaching therapeutic dose of QTc-prolonging medications
  - More frequent monitoring in elderly or those with multiple cardiac risk factors
  - Consider cardiology consultation for complex cases

Patient with Cardiovascular Disease Requiring Psychiatric Medication

↓

Comprehensive Cardiac Assessment: History, ECG, BP, HR, Electrolytes

↓

High-risk cardiac features present?
(Recent MI, unstable angina, severe HF, significant arrhythmia) ← **No**

Yes →

Consider cardiology

Select lower-risk medication

consultation
Delay non-essential
psychotropics
Cardiology consultation ↓

required

Start at lower dose
Titrate more slowly
Monitor more frequently

Clinical Pearl: *Depression is an independent risk factor for poor outcomes in cardiovascular disease. Treating depression may improve cardiac outcomes, but medication selection is critical. Sertraline has the most evidence for safety and efficacy in cardiac patients, particularly following myocardial infarction.*

Psychiatric Management in Renal Impairment

General Considerations

Renal impairment affects medication clearance, potentially leading to drug accumulation and toxicity. Psychiatric symptoms are common in chronic kidney
disease (CKD) and end-stage renal disease (ESRD), including depression, anxiety, sleep disturbances, and cognitive impairment.

High-Risk Medications in Renal Impairment

- **Lithium:** Primarily eliminated by kidneys; risk of toxicity significantly increased
- **Gabapentin/Pregabalin:** Require significant dose reduction
-

- **Duloxetine:** Contraindicated in severe renal impairment (CrCl <30 mL/min)
- **Desvenlafaxine:** Requires dose adjustment in moderate-severe renal impairment
- **Paliperidone:** Requires dose adjustment in renal impairment

Medication Dosing Adjustments in Renal Impairment

Lithium	Reduce dose by 25-50% Monitor levels closely	**Reduce dose by 50-75% Consider alternative**	**Avoid if possible**	**Avoid**
Gabapentin	300-900 mg/ day	200-700 mg/ day	100-300 mg/ day	100-300 mg after dialysis
Pregabalin	No adjustment	75-300 mg/ day	25-150 mg/ day	25-75 mg after dialysis
Duloxetine	No adjustment	No adjustment	**Avoid**	**Avoid**

Venlafaxine	No adjustment	Reduce dose by 25-50%	Reduce dose by 50%	Reduce dose by 50%

Desvenlafaxine	No adjustment	50 mg/day maximum	50 mg every other day	50 mg every other day
Paliperidone	No adjustment	3 mg/day initial dose	1.5 mg/day initial dose	1.5 mg/day initial dose
Most SSRIs	No adjustment	No adjustment	Start low, titrate slowly	Start low, titrate slowly
Mirtazapine	No adjustment	No adjustment	Start low, titrate slowly	Start low, titrate slowly
Bupropion	No adjustment	No adjustment	Lower doses, avoid XL	Lower doses, avoid XL

Special Considerations in Dialysis

Patients on dialysis have unique considerations due to medication removal during dialysis sessions and fluid/electrolyte shifts that can affect medication levels.

Medication Timing in Hemodialysis

- **Medications significantly removed by dialysis:** Administer after dialysis session (gabapentin, pregabalin, levetiracetam)
- **Medications minimally affected by dialysis:** Can be given without specific timing (most SSRIs, mirtazapine, most antipsychotics)
- **Medications requiring careful monitoring:** Lithium (if used), benzodiazepines with active metabolites

Monitoring Recommendations in Renal Impairment

- **Baseline Assessment:**
  - Comprehensive renal function assessment (BUN, creatinine, eGFR)
  - Electrolytes, particularly potassium
  - Medication review for nephrotoxic agents
- **Follow-up Monitoring:**
  - Regular renal function monitoring (frequency based on severity)
  - More frequent monitoring with potentially nephrotoxic medications
  - Monitor for signs of medication toxicity
  - Adjust doses based on changing renal function
- **Lithium (if used):**
  - More frequent lithium level monitoring
  - Target lower therapeutic levels (0.4-0.8 mEq/L)
  - Monitor for signs of toxicity even at therapeutic levels

Clinical Pearl: *Uremic encephalopathy can mimic psychiatric disorders, presenting with cognitive impairment, psychosis, or delirium. Always consider the contribution of uremia to psychiatric symptoms in patients with renal impairment. Treating the underlying renal condition may improve psychiatric symptoms.*

🫓 Psychiatric Management in Hepatic Dysfunction

General Considerations

The liver is the primary site of metabolism for most psychotropic medications. Hepatic dysfunction can lead to decreased drug clearance, increased bioavailability, and potential toxicity. Hepatic encephalopathy can present with various psychiatric symptoms.

High-Risk Medications in Hepatic Dysfunction

- **Valproate:** Contraindicated in active liver disease, history of hepatic dysfunction
- **Carbamazepine:** Can cause hepatotoxicity; use with caution
- **Duloxetine:** Contraindicated in substantial alcohol use or chronic liver disease
- **Nefazodone:** Associated with hepatotoxicity; avoid in liver disease
- **TCAs:** Extensively metabolized by liver; increased risk of toxicity
- **Benzodiazepines metabolized by oxidation:** Diazepam, chlordiazepoxide, alprazolam

Preferred Medications in Hepatic Dysfunction

- **SSRIs:** Citalopram and escitalopram have simpler metabolism
- **Benzodiazepines metabolized by conjugation:** Lorazepam, oxazepam, temazepam

- **Olanzapine:** Multiple metabolic pathways reduce impact of hepatic impairment
- **Gabapentin/Pregabalin:** Minimal hepatic metabolism (primarily renal excretion)
- **Lithium:** Primarily renal elimination (monitor for fluid/electrolyte changes)

Medication Adjustments Based on Hepatic Impairment Severity

Citalopram	No adjustment	20 mg/day maximum	20 mg/day maximum
Escitalopram	No adjustment	10 mg/day maximum	10 mg/day maximum

Sertraline	No adjustment	Start low, titrate slowly	Use with caution, lower doses
Paroxetine	No adjustment	Initial 10 mg/day, max 40 mg/day	Initial 10 mg/day, max 20 mg/day
Venlafaxine	Reduce dose by 25%	Reduce dose by 50%	Reduce dose by 50-75%
Mirtazapine	No adjustment	Reduce dose by 25%	Reduce dose by 50%
Bupropion	No adjustment	100 mg once daily	Avoid

Quetiapine	Start at 25 mg/ day	Start at 25 mg/ day, slower titration	Start at 25 mg/day, very slow titration
Risperidone	Start at 0.5 mg BID	Start at 0.5 mg daily	Start at 0.5 mg every other day
Aripiprazole	No adjustment	Reduce dose by 50%	Reduce dose by 75%
Lamotrigine	Reduce dose by 25%	Reduce dose by 50%	Reduce dose by 75%
Valproate	Use with caution	**Avoid**	**Contraindicated**
Lorazepam	No adjustment	Reduce dose by 25-50%	Reduce dose by 50%
Diazepam	Reduce dose by 50%	**Avoid if possible**	**Avoid**

Monitoring Recommendations in Hepatic Dysfunction

- **Baseline Assessment:**
  - Comprehensive liver function tests (ALT, AST, bilirubin, albumin, INR)
  - Assessment of hepatic encephalopathy
  - Review of potentially hepatotoxic medications
  - Alcohol and substance use history
- **Follow-up Monitoring:**
  -

    - Regular LFTs (frequency based on medication and severity of liver disease)
    - More frequent monitoring with potentially hepatotoxic medications
    - Monitor for signs of hepatic encephalopathy
    - Assess for drug-induced liver injury (DILI)
- **Medication-Specific Monitoring:**
    - Valproate (if used): LFTs monthly for first 6 months
    - Carbamazepine: LFTs at baseline, 1, 3, and 6 months
    - Antipsychotics: More frequent LFT monitoring than in patients without liver disease

Clinical Pearl: *Hepatic encephalopathy can present with a wide range of psychiatric symptoms, from subtle cognitive changes to frank psychosis. Consider hepatic encephalopathy in patients with liver disease who develop new or worsening psychiatric symptoms. Treating the underlying liver condition and reducing ammonia levels may improve psychiatric symptoms.*

🧠 Psychiatric Management in Neurological Conditions

General Considerations

Neurological conditions frequently present with psychiatric symptoms, and psychiatric disorders are common comorbidities in neurological disease. Medication selection must consider both the neurological condition and potential drug interactions with neurological medications.

Epilepsy and Seizure Disorders

High-Risk Medications in Epilepsy

- **Bupropion:** Lowers seizure threshold; contraindicated in seizure disorders
- **Clozapine:** Dose-dependent risk of seizures
- **TCAs:** Lower seizure threshold, especially at higher doses
- **Chlorpromazine:** Higher risk of lowering seizure threshold
- **Maprotiline:** Associated with seizures

Preferred Medications in Epilepsy

- **SSRIs:** Generally safe; citalopram and escitalopram have fewer drug interactions
- **Lamotrigine:** Mood stabilizer with antiepileptic properties
- **Valproate:** For both mood stabilization and seizure control
- **Risperidone/Aripiprazole:** Lower risk of lowering seizure threshold

Carbamazepine + Antipsychotics

Carbamazepine induces metabolism, reducing antipsychotic levels by 50-75%. May require higher antipsychotic doses.

Carbamazepine + Lamotrigine

Carbamazepine decreases lamotrigine levels by ~40%. May need to increase lamotrigine dose.

Valproate + Lamotrigine

Valproate inhibits lamotrigine metabolism, doubling levels. Must reduce lamotrigine dose by ~50% and slow titration.

Phenytoin + Antidepressants

Phenytoin induces metabolism of many antidepressants, reducing efficacy. Monitor for breakthrough symptoms.

Parkinson's Disease Fluoxetine + Carbamazepine

Fluoxetine inhibits metabolism of carbamazepine,

increasing levels. Monitor carbamazepine levels.	**Lamotrigine + SSRIs**	Generally minimal interactions. Safe combination for depression in epilepsy.

High-Risk Medications in Parkinson's Disease

- **Typical Antipsychotics:** Block dopamine receptors, worsen motor symptoms
- **Risperidone/Olanzapine:** Higher D2 blockade, can worsen parkinsonism
- **Metoclopramide:** Dopamine antagonist, worsens motor symptoms
- **Valproate:** May cause parkinsonism
- **Lithium:** Can worsen tremor

Preferred Medications in Parkinson's Disease

- **SSRIs:** Generally well-tolerated; sertraline or citalopram preferred
- **Bupropion:** Dopaminergic effects may be beneficial
- **Pramipexole:** Dopamine agonist with antidepressant properties
- **Quetiapine:** Low-dose for psychosis with minimal impact on motor symptoms
- **Clozapine:** Effective for psychosis with minimal impact on motor symptoms (requires monitoring)
-

Pimavanserin: Approved for Parkinson's disease psychosis

Multiple Sclerosis

Considerations in Multiple Sclerosis

- Depression affects up to 50% of MS patients
- Pseudobulbar affect may be treated with dextromethorphan/quinidine
- Fatigue is common and may be exacerbated by sedating medications
- Cognitive impairment may affect medication adherence

Preferred Medications in Multiple Sclerosis

- **SSRIs:** First-line for depression in MS
- **Bupropion:** May help with fatigue
- **Modafinil/Armodafinil:** For MS-related fatigue
- **Amantadine:** Alternative for fatigue
- **Dextromethorphan/Quinidine:** For pseudobulbar affect

Dementia

High-Risk Medications in Dementia

- **Anticholinergic Medications:** Worsen cognition (TCAs, some antihistamines, oxybutynin)
- **Benzodiazepines:** Worsen cognition, increase fall risk
- **Antipsychotics:** Black box warning for increased mortality in elderly with

dementia

- **Medications with sedating properties:** May worsen confusion

Preferred Medications in Dementia

- **SSRIs:** Sertraline, citalopram, escitalopram for depression or agitation
- **Trazodone:** Low-dose for sleep or agitation
- **Mirtazapine:** For depression with appetite/sleep disturbance
- **Memantine:** May help with behavioral symptoms in moderate-severe dementia
- **Cholinesterase Inhibitors:** May reduce behavioral symptoms

Monitoring Recommendations in Neurological Conditions

- **Epilepsy:**
  - Monitor seizure frequency with medication changes
  - Check anticonvulsant levels with potential interactions
  - Assess for breakthrough seizures
- **Parkinson's Disease:**
  - Regular assessment of motor symptoms
  - Monitor for worsening tremor, rigidity, bradykinesia
  - Assess for medication timing issues relative to levodopa dosing
- **Multiple Sclerosis:**
  -

- Monitor fatigue levels
    - Assess for impact on MS symptoms
    - Consider medication adherence strategies if cognitive impairment present
- **Dementia:**
    - Regular cognitive assessment
    - Monitor for behavioral changes
    - Assess for extrapyramidal symptoms with antipsychotics
    - Regular review of risk-benefit ratio for all psychotropics

Clinical Pearl: *Psychiatric symptoms may be the presenting feature of neurological disorders. Consider neurological causes when psychiatric symptoms present atypically, have unusual age of onset, or are accompanied by neurological signs. For example, depression with cognitive changes may be the first sign of dementia, while mania with neurological signs may suggest multiple sclerosis or other CNS lesions.*

Psychiatric Management in Endocrine Disorders

General Considerations

Endocrine disorders frequently present with psychiatric symptoms that can mimic primary psychiatric disorders. Treating the underlying endocrine condition often improves psychiatric symptoms, but psychiatric medications may still be needed.

Thyroid Disorders

Considerations in Hypothyroidism

- Can present with depression, cognitive slowing, fatigue
- Optimize thyroid replacement before starting antidepressants
- Patients may be more sensitive to CNS effects of medications
- Lithium can induce or worsen hypothyroidism

Considerations in Hyperthyroidism

- Can present with anxiety, insomnia, irritability, mania-like symptoms
- Patients may be more sensitive to stimulating medications
- Beta-blockers may help with physical symptoms of anxiety
- Avoid stimulants until thyroid function normalized

Medication Adjustments in Thyroid Disorders

Hypothyroidism	• SSRIs • Bupropion (may help with fatigue) • Mirtazapine	• Sedating medications (may worsen fatigue) • Lithium (risk of worsening hypothyroidism)	• Regular TSH monitoring • Assess for residual depression after thyroid normalization

Hyperthyroidism • SSRIs (once thyroid stabilized) • after thyroid normalization	Propranolol for physical anxiety symptoms •	Bupropion • SNRIs (may	• Stimulants • worsen anxiety/ tachycardia) • Reassess need	Monitor heart rate and BP for psychiatric medications
		• Benzodiazepines (short-term)		

Diabetes Mellitus

High-Risk Medications in Diabetes

- **Atypical Antipsychotics:** Particularly olanzapine and clozapine can worsen glycemic control
- **Valproate:** Associated with insulin resistance and weight gain
- **TCAs:** May worsen glycemic control
- **Medications causing significant weight gain**

Preferred Medications in Diabetes

- **SSRIs:** Particularly fluoxetine, sertraline
- **Bupropion:** Weight-neutral or modest weight loss
- **Aripiprazole/Ziprasidone:** Lower metabolic risk antipsychotics
-

Lurasidone: Minimal effect on glucose

- **Lamotrigine:** Minimal effect on weight and glucose

Monitoring Recommendations in Diabetes

- **Baseline Assessment:**
  - Fasting glucose, HbA1c
  - Weight, BMI
  - Lipid profile
  - Blood pressure
- **Follow-up Monitoring:**
  - More frequent glucose monitoring with high-risk medications
  - Weight at each visit
  - HbA1c every 3-6 months
  - Consider home glucose monitoring with medication changes

Adrenal Disorders

Considerations in Cushing's Syndrome

- Can present with depression, anxiety, insomnia, mania, psychosis
- Treating the underlying hypercortisolism is primary
- Psychiatric symptoms may persist after cortisol normalization

Considerations in Addison's Disease

- Can present with fatigue, depression, salt craving
- Optimize steroid replacement before psychiatric treatment
- Stress doses of steroids may be needed during severe psychiatric episodes

Medication Adjustments in Adrenal Disorders

Cushing's Syndrome	• SSRIs • Olanzapine (for psychosis) • Benzodiazepines (short-term for anxiety)	• Stimulants (may worsen anxiety/ insomnia) • Medications that can worsen hypertension	• Monitor cortisol levels • Blood pressure monitoring • Glucose monitoring
Addison's Disease •	SSRIs • Bupropion (may help with fatigue) • Modafinil (for fatigue)	Medications that may mask symptoms of adrenal crisis • Electrolyte • Medications that induce CYP3A4 (may affect steroid metabolism)	• • monitoring Blood pressure monitoring • Stress

dose education

Clinical Pearl: *Treatment-resistant depression should prompt consideration of endocrine disorders, particularly hypothyroidism and Cushing's syndrome. In patients with known endocrine disorders, psychiatric symptoms may be the first sign of suboptimal treatment or disease recurrence. Always optimize treatment of the underlying endocrine condition before attributing symptoms to a primary psychiatric disorder.*

 Psychiatric Management in Autoimmune Conditions

General Considerations

Autoimmune conditions can directly affect the central nervous system or indirectly cause psychiatric symptoms through inflammatory mechanisms, pain, disability, or medication effects. Psychiatric symptoms may precede, coincide with, or follow autoimmune disease diagnosis.

Systemic Lupus Erythematosus (SLE)

Considerations in SLE

- Neuropsychiatric lupus can present with depression, psychosis, cognitive dysfunction
- Distinguish between primary psychiatric disorder and neuropsychiatric lupus
- Corticosteroids can cause mood symptoms, psychosis

- Some psychotropics may induce photosensitivity (phenothiazines)

Medication Adjustments in SLE

- **Preferred medications:**
  - SSRIs (sertraline, escitalopram)
  - Hydroxyzine for anxiety (non-photosensitizing)
  - Lamotrigine for mood stabilization
- **Use with caution:**
  - Carbamazepine (risk of blood dyscrasias)
  - Phenothiazines (photosensitivity)
  - Medications with significant drug interactions with immunosuppressants

Rheumatoid Arthritis (RA)

Considerations in RA

- Depression and anxiety are common comorbidities
- Pain management is critical
- Consider medication interactions with DMARDs
- Corticosteroids can cause mood symptoms

Medication Adjustments in RA

- **Preferred medications:**

- Duloxetine (antidepressant with pain benefits)
- Milnacipran (for pain and depression)
- SSRIs
- Low-dose amitriptyline for pain/sleep (if tolerated)

- **Use with caution:**
  - NSAIDs with SSRIs (bleeding risk)
  - Methotrexate with trimethoprim (increased methotrexate toxicity)

Multiple Sclerosis (MS)

Considerations in MS

- Depression affects up to 50% of MS patients
- Fatigue is a prominent symptom
- Cognitive impairment may affect medication adherence
- Interferon therapy can worsen depression

Medication Adjustments in MS

- **Preferred medications:**
  - SSRIs
  - Bupropion (may help with fatigue)
  - Modafinil/armodafinil for fatigue
  - Dextromethorphan/quinidine for pseudobulbar affect
- **Use with caution:**

- Medications with significant sedation
- Anticholinergic medications (may worsen cognitive symptoms)

Autoimmune Encephalitis

Considerations in Autoimmune Encephalitis

- Can present primarily with psychiatric symptoms (psychosis, mood symptoms, catatonia)
- Anti-NMDA receptor encephalitis often misdiagnosed as primary psychiatric disorder
- Immunotherapy is primary treatment
- Psychiatric symptoms may persist after acute phase

Medication Adjustments in Autoimmune Encephalitis

- **Acute phase:**
  - Benzodiazepines for agitation/catatonia
  - Antipsychotics at lowest effective dose (preferably quetiapine or olanzapine)
- **Recovery phase:**
  - SSRIs for depression/anxiety
  - Cognitive enhancers if cognitive symptoms persist
  - Gradual taper of antipsychotics as appropriate

Monitoring Recommendations in Autoimmune Conditions

- **Baseline Assessment:**
  - Comprehensive autoimmune disease activity assessment
  - Pain assessment
  - Cognitive assessment if indicated
  - Review of immunomodulatory medications
- **Follow-up Monitoring:**
  - Regular assessment of disease activity
  - Monitor for medication interactions
  - Assess for corticosteroid-induced psychiatric symptoms
  - Monitor CBC with certain medication combinations

Clinical Pearl: *New-onset psychiatric symptoms, particularly psychosis or mania, in patients with autoimmune conditions should prompt consideration of neuropsychiatric manifestations of the autoimmune disease, medication effects (especially corticosteroids), or autoimmune encephalitis. In young patients with atypical psychiatric presentations, consider screening for autoimmune encephalitis, particularly if accompanied by neurological symptoms, autonomic instability, or rapid deterioration.*

💊 Drug-Disease Interactions: Quick Reference

Cardiovascular Disease • Ziprasidone, iloperidone • High-dose citalopram/ escitalopram • Stimulants • Venlafaxine (high dose) • TCAs Sertraline Bupropion (stable cardiac disease) • Mirtazapine • Aripiprazole, brexpiprazole		
Renal Impairment	• Lithium • Gabapentin/pregabalin (without dose adjustment) • Duloxetine (severe impairment) • Desvenlafaxine (without dose adjustment)	• Most SSRIs • Mirtazapine • Olanzapine • Aripiprazole
Hepatic Dysfunction	• Valproate • Carbamazepine • Duloxetine • Nefazodone • TCAs • Diazepam, alprazolam	• Citalopram, escitalopram • Lorazepam, oxazepam • Olanzapine • Gabapentin/ pregabalin • Lithium

Seizure Disorder	• Bupropion • Clozapine • TCAs • Chlorpromazine • Maprotiline	• SSRIs • Lamotrigine • Valproate • Risperidone, aripiprazole

Parkinson's Disease

Typical antipsychotics • Risperidone, olanzapine • Metoclopramide • Lithium •

SSRIs • Bupropion • Valproate • Quetiapine (low dose) • Clozapine, pimavanserin • Pramipexole

Dementia	• Anticholinergics • Benzodiazepines • Antipsychotics (mortality risk) • Highly sedating medications	• SSRIs • Trazodone (low dose) • Mirtazapine • Memantine • Cholinesterase inhibitors

Diabetes	• Olanzapine, clozapine • Valproate • TCAs • Medications causing weight gain	• SSRIs • Bupropion • Aripiprazole, ziprasidone • Lurasidone • Lamotrigine
Obesity	• Olanzapine, clozapine • Mirtazapine • Valproate • Paroxetine	• Bupropion • Fluoxetine • Aripiprazole, ziprasidone • Lurasidone • Lamotrigine

Chronic Pain	• Medications that may worsen pain perception • Medications with significant drug interactions with analgesics	• Duloxetine • Venlafaxine • Milnacipran • Low-dose amitriptyline • Pregabalin/ gabapentin

Clinical Pearl: *When managing psychiatric medications in medically complex patients, consider the "start low, go slow" approach, but "aim for the target dose." Begin with lower doses, titrate more gradually, but aim for therapeutic*

doses unless limited by side effects. Regular reassessment of the risk-benefit ratio is essential, as medical conditions may change over time.

🔄 Practical Approach to Psychiatric Management in Medically Complex Patients

Medically Complex Patient Requiring Psychiatric Treatment

↓

Comprehensive Assessment of Medical Conditions and Current Medications

↓

Determine if Psychiatric Symptoms Could Be Secondary to Medical Condition or Medications

↓

Are symptoms likely secondary to medical condition/medications? ←

No Yes →

Treat primary psychiatric condition

↓

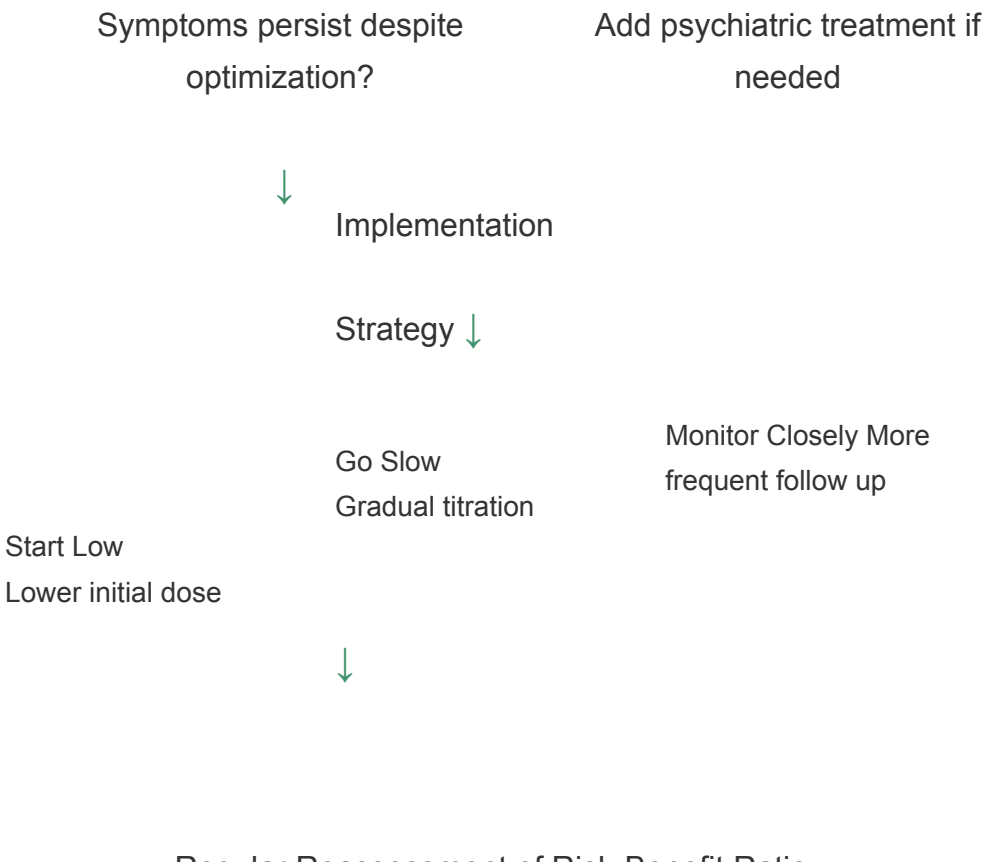
Select medication with lowest risk for medical conditions

Optimize treatment of medical condition

↓

Consider medication adjustments

↓



Key Principles for Managing Psychiatric Medications in Medically Complex Patients

1. **Rule out medical causes of psychiatric symptoms** before attributing to primary psychiatric disorder
2. **Optimize treatment of medical conditions** as this may improve psychiatric symptoms
3. **Review all medications** for potential interactions and cumulative side effects
4. **Select psychiatric medications** with the lowest risk profile for the specific medical conditions
5. **Start with lower doses** and titrate more gradually than in medically healthy patients
6. **Monitor more frequently** for both therapeutic effects and adverse effects

7. **Coordinate care** with other medical providers to ensure comprehensive treatment
8. **Regularly reassess the risk-benefit ratio** as medical conditions may change over time
9. **Consider non-pharmacological interventions** to reduce medication burden
10. **Educate patients and caregivers** about potential interactions and warning signs

Clinical Pearl: *In medically complex patients, the principle of "clinical parsimony" is essential—use the fewest medications at the lowest effective doses to achieve therapeutic goals. Consider deprescribing or simplifying medication regimens when possible. Remember that psychiatric symptoms may be the first sign of medical decompensation in complex patients.*

General Clinical Pearls for Medically Complex Patients:

- *Medical and psychiatric conditions often interact bidirectionally—medical conditions can worsen psychiatric symptoms, and psychiatric conditions can impact medical outcomes*
- *Always consider the possibility that new or worsening psychiatric symptoms may be due to the medical condition itself, medication side effects, or metabolic abnormalities*
- *Coordinate care with other medical providers to ensure comprehensive treatment and avoid contradictory recommendations*
- *Medication selection should be individualized based on the specific medical comorbidities, with careful consideration of potential drug-disease and drug drug interactions*

- *Regular reassessment of the risk-benefit ratio is essential, as medical conditions may change over time*
- *Non-pharmacological interventions (psychotherapy, lifestyle modifications) may be particularly valuable in reducing medication burden in medically complex patients*
- *Patient and caregiver education about potential interactions and warning signs is critical for safe medication management*

References

Aeddula, N. (2024). *Chronic kidney disease*. National Library of Medicine; StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK535404/

Androshchuk, V., Montarello, N., & Rajani, R. (2025). Adverse Cardiovascular Effects of Psychotropic Medications. *British Journal of Hospital Medicine*, 1–18. https://doi.org/10.12968/hmed.2024.0773

Birkinshaw, H., Friedrich, C. M., Cole, P., Eccleston, C., Serfaty, M., Stewart, G., White, S., R Andrew Moore, Phillippo, D., & Pincus, T. (2023). Antidepressants for pain management in adults with chronic pain: a network meta-analysis. *Antidepressants for Pain Management in Adults with Chronic Pain: A Network Meta-Analysis*, *2023*(5). https://doi.org/10.1002/14651858.cd014682.pub2

Feinstein, A. (2011). Multiple sclerosis and depression. *Multiple Sclerosis Journal*, *17*(11), 1276–1281. https://doi.org/10.1177/1352458511417835

Gunther, M., & Dopheide, J. A. (2022). Antipsychotic Safety in Liver Disease: A Narrative Review and Practical Guide for the Clinician. *Journal of the Academy of Consultation-Liaison Psychiatry*. https://doi.org/10.1016/j.jaclp.2022.09.006

Habibeh Yekehtaz, Mehdi Farokhnia, & Shahin Akhondzadeh. (2013). Cardiovascular Considerations in Antidepressant Therapy: An Evidence-Based Review. *The Journal*

of Tehran University Heart Center, *8*(4), 169. https://pmc.ncbi.nlm.nih.gov/articles/PMC4434967/

Kar, S., Dalal, P., & Agarwal, S. (2022). Management of psychiatric disorders in patients with chronic kidney diseases. *Indian Journal of Psychiatry*, *64*(8), 394. https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry_1016_21

Kemp, A. H., Brunoni, A. R., Bittencourt, M. S., Nunes, M. A., BenseÃ±or, I. M., & Lotufo, P. A. (2015). The Association between Antidepressant Medications and Coronary Heart Disease in Brazil: A Cross-Sectional Analysis on the Brazilian Longitudinal Study of Adult Health (ELSA-Brazil). *Frontiers in Public Health*, *3*. https://doi.org/10.3389/fpubh.2015.00009

McKeon, K. P., & Jiang, S. H. (2020). Treatment of systemic lupus erythematosus. *Www.nps.org.au*, *43*(3). https://doi.org/10.18773/austprescr.2020.022

Menon, V., Ransing, R., & Praharaj, S. (2022). Management of psychiatric disorders in patients with hepatic and gastrointestinal diseases. *Indian Journal of Psychiatry*, *64*(8), 379. https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry_18_22

National Institute of Neurological Disorders and Stroke. (2025). *Epilepsy and seizures*. Www.ninds.nih.gov. https://www.ninds.nih.gov/health-information/disorders/epilepsy-and-seizures

Parker Gregg, L., & Susan Hedayati, S. (2020, January 1). *Chapter 68 - Treatment of Psychiatric Disorders in Chronic Kidney Disease Patients* (P. L. Kimmel & M. E. Rosenberg, Eds.). ScienceDirect; Academic Press. https://www.sciencedirect.com/science/article/pii/B9780128158760000681

Ruiz-Santiago, C., Rodríguez-Pinacho, C., Pérez-sánchez, G., & Acosta-cruz, E. (2024). Effects of selective serotonin reuptake inhibitors on endocrine system (Review). *Biomedical Reports*, *21*(3). https://doi.org/10.3892/br.2024.1816

Wani, R. A., Dar, M. A., Margoob, M. A., Rather, Y. H., Haq, I., & Shah, M. S. (2015). Diabetes mellitus and impaired glucose tolerance in patients with schizophrenia, before and after antipsychotic treatment. *Journal of Neurosciences in Rural Practice*, *6*(01), 017–022. https://doi.org/10.4103/0976-3147.143182