



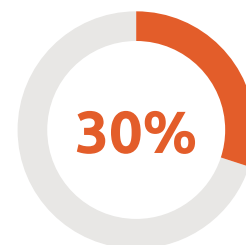
Talking to Individuals and Families About Clozapine

Clozapine, an antipsychotic or neuroleptic medication, is the only FDA-approved medication for treatment-resistant schizophrenia.^{1,2} Clozapine is also used to treat recurrent suicidal behavior in schizophrenia or schizoaffective disorder.¹

Why Might Someone Need Clozapine?



Schizophrenia is a serious condition and it requires fast action to address barriers and improve symptoms.



Approximately 30% of patients with schizophrenia are considered treatment resistant.¹

Individuals who take clozapine report improvements in symptoms of psychosis, sleep, and anxiety. They also report increased functioning, a sense of recovery, and stabilization.³

These positive outcomes demonstrate that clozapine is a sound treatment option and may be considered prior to the onset of treatment resistance. In fact, clozapine has been around for many years and is an effective medication with low, manageable risk. It can improve the debilitating symptoms that individuals who have treatment-resistant schizophrenia experience.

In spite of this, it is still underutilized by clinicians.³ One of the primary reasons for this is that treatment with clozapine requires routine bloodwork. This can be time consuming, inconvenient, and increase health concerns for those who consider it. However, with current advances in Remote Patient Monitoring (RPM), white blood cell monitoring can be managed from home. This reduces the need for outpatient bloodwork visits. RPM programs can also monitor weight and blood pressure. This provides more convenience for patients and care providers.⁴⁻⁶

Does Taking Clozapine Have an Impact?

Many individuals who have schizophrenia find that clozapine makes a remarkable difference in their daily lives. This is something that can have a positive ripple effect.^{7,8} A successful response to this medication may decrease the burden on families and support systems, improve treatment adherence, and result in a decreased need for rehospitalization.^{7,9} Relief from the intractable symptoms of schizophrenia – whether before or after treatment resistance occurs – can significantly improve quality of life.

Clozapine may be a good choice for patients who are in search of an effective medication as part of their treatment plan.



Possible Positive Outcomes

Research shows that clozapine treatment is associated with:^{1,2,7-9}

- ✓ Reduction in positive symptoms (e.g., delusions, hallucinations)
- ✓ Improved daily functioning
- ✓ A decrease in suicide attempts and completions
- ✓ A decrease in anxiety and sleep irregularities
- ✓ Fewer hospitalizations

- ✓ Improved quality of life
- ✓ Improved psychosocial functioning
- ✓ Fewer extrapyramidal symptoms or EPS¹⁰

Clozapine is also linked with reduced caregiver burden and reduced psychological impact on caretakers. This indicates that its positive effect on treatment-resistant mental illness may have beneficial effects on family members as well.⁷⁻¹¹



Possible Side Effects

As with any medication, patients may experience side effects. Some of these are rare yet require prompt attention if observed. Potential side effects may include:

- ✓ Gastrointestinal symptoms like constipation, nausea, and vomiting
- ✓ Increased blood pressure and heart rate
- ✓ Changes in metabolism, possibly leading to weight gain
- ✓ Seizures
- ✓ Neurological symptoms like drowsiness and dizziness

You should use caution when you combine clozapine with other neuroleptics like aripiprazole. This is due to potential elevation of creatine kinase and leukocytosis.¹² Aripiprazole may be given in crisis situations during emergency department

visits so it is important to be aware of this contraindication.

Although extremely rare, prescribers should be alert for Neuroleptic Malignant Syndrome (NMS).^{12,13} NMS occurs in less than 5% of patients. It presents with sudden symptoms of tachycardia, muscle rigidity, mental status change, fever, or elevated creatine kinase. Although NMS is unlikely to occur, it requires an established plan for patients and their families with information on how to access emergency services if symptoms arise.

Even more rarely, clozapine use is associated with severe neutropenia (also known as agranulocytosis), a dramatic drop in neutrophil count that results in an increased vulnerability to infection. Because neutropenia might be a heritable trait,¹⁴ it is essential to have a detailed patient history of other family

members who have neutropenia. Current data show that less than 1% of patients on clozapine develop severe neutropenia.¹⁵ To help prevent this serious side effect, guidelines require prescribers to order

full blood counts weekly for the first six months of treatment. Almost all cases of severe neutropenia present in this time frame.

Discussing Clozapine With Your Patients and Their Families

It is important to communicate and facilitate discussions with individuals, their family members, and support systems. When you share information on treatment goals, benefits, side effects, and more, it can help improve treatment adherence and alleviate concerns.^{7,9} It also improves patient and family engagement in treatment and may lead to better outcomes.



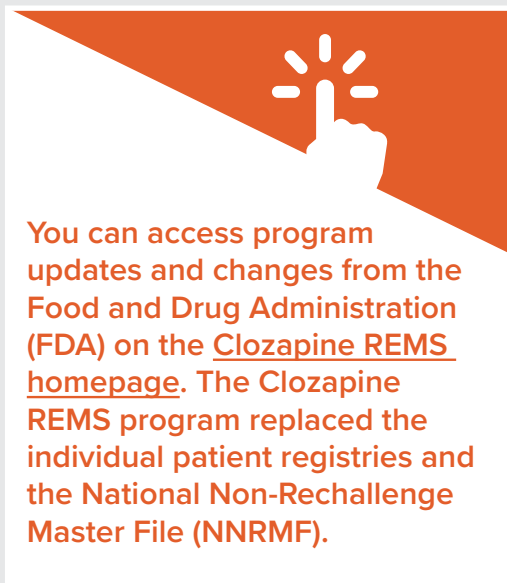
Apply the **REAP** model to aid in the decision-making process:

- R** RECOGNIZE goals
- E** EXPLAIN how clozapine supports goals
- A** ACKNOWLEDGE patient concerns
- P** PROVIDE accurate information to patients and their support system so they can make informed decisions

Clozapine Risk Evaluation and Mitigation Strategy

When you develop a plan to prescribe clozapine, you can access important resources to complete the mandated [Clozapine REMS](#) certification. Patients must also meet the following requirements to start on this medication:

- ✓ Enrollment in the Clozapine REMS Program
- ✓ An Absolute Neutrophil Count (ANC) lab on file with the Clozapine REMS Program
- ✓ ANC lab must be within the acceptable range or a [treatment rationale](#) must be submitted that details how the benefits of treatment outweigh the risks
- ✓ An ANC ≥ 1000 /microL should be indicated (≥ 500 /microL for benign ethnic neutropenia)
- ✓ Lower ANC levels require more frequent monitoring and possible interruption of clozapine and/or reevaluation of its use



You can access program updates and changes from the Food and Drug Administration (FDA) on the [Clozapine REMS homepage](#). The Clozapine REMS program replaced the individual patient registries and the National Non-Rechallenge Master File (NNRMF).

Additional Resources

[SMI Adviser](#)

[Clozapine Center of Excellence](#)

[Knowledge Base for Individuals and Families](#)

[Support Groups](#)

[NAMI: Information on Clozapine](#)

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