

## Second Generation Antipsychotics – Recommended Monitoring Parameters

Parameter	Frequency
Personal and Family History	Baseline and annually
Weight/Height	Every 3 months
Blood Pressure	Baseline, at 3 months, then annually
Fasting Blood glucose recommended if not able to obtain FBS, then Random Glucose can be done	Baseline, at 6 months, then annually
Fasting Lipid Panel (Cholesterol/Triglycerides)	Baseline, at 6 months, then annually
Electrocardiogram	Baseline and periodic for Ziprasidone (Geodon), Thioridazine (Mellaril): <b>ONLY</b> in patients at risk for QT <sub>c</sub> prolongation. Periodic monitoring depends on changes in electrolyte status (hypokalemia or hypomagnesemia) as a result of diuretic therapy, diarrhea, etc.
Global AIMS (Abnormal Involuntary Movement Scale)	Baseline and annually at minimum
Prolactin level	Check only if symptomatic of hyperprolactinemia

### Mood Stabilizers – Recommended Monitoring Parameters

Carbamazepine (Tegretol®, Carbatrol®), lithium (Lithobid®, Eskalith®), valproic Acid (Depakene®), divalproex sodium (Depakote®)

Parameter	Frequency
Complete Blood Count (CBC)	<u>Carbamazepine</u> : Baseline, then every 3 months <u>Lithium</u> : Baseline <u>Valproic Acid</u> : Baseline, then every 6 months
Electrolytes	Carbamazepine, Lithium, Valproic Acid – Baseline
BUN/Serum Cr	<u>Carbamazepine</u> : Baseline <u>Lithium</u> : Baseline and every 6 months <u>Valproic Acid</u> : Baseline
Liver Function Test (LFT)	<u>Carbamazepine</u> : Baseline <u>Lithium</u> : Baseline, <u>Valproic Acid</u> : Baseline, then every 6 months
Thyroid - Stimulating Hormone (TSH)	<u>Carbamazepine</u> : Baseline <u>Lithium</u> : Baseline, then every 6 months <u>Valproic Acid</u> : Baseline
Electrocardiogram (EKG)	Lithium – Baseline
Serum Drug Level	Once stabilized – Carbamazepine and Valproic Acid: every 6 months, Lithium: every 12 months

### Antidepressants – Recommended Monitoring Parameters

Clomipramine (Anafranil®), mirtazapine (Remeron®), duloxetine (Cymbalta®), venlafaxine (Effexor®), nefazadone (Serzone®)

Parameters	Frequency
Weight/Height	<u>All</u> : Baseline, then periodically as clinically indicated
Blood Pressure/Pulse	<u>Clomipramine, duloxetine, and venlafaxine</u> : Baseline, then periodically as clinically indicated
Electrocardiogram	<u>All TCA</u> : Baseline, then periodically as indicated
Liver Function Test	<u>Nefazadone</u> : Baseline, then every 6 months

## Monitoring Psychotropic Medications

The following recommendations are not intended to interfere with or replace clinical judgment of the clinician when assessing patients on psychotropic medications. Rather, they are intended to provide guidelines and to assist clinicians with decisions in providing high quality care, ensuring that patients receive the intended benefit of the medications, and to minimize unwanted side effects from the medications.

### Antipsychotic Medications

- **Typical Antipsychotics:** also known as **First Generation Antipsychotics:** such as Chlorpromazine (Thorazine), Fluphenazine (Prolixin), Haloperidol (Haldol), Perphenazine (Trilafon), Prochlorperazine (Compazine), Thiothixene (Navane), Thioridazine (Mellaril), and Trifluoperazine (Stelazine).
- **Atypical Antipsychotics:** also known as **Second Generation Antipsychotics:** Aripiprazole (Abilify), Clozapine (Clozaril), Olanzapine (Zyprexa), Paliperidone (Invega), Quetiapine (Seroquel), Risperidone (Risperdal), and Ziprasidone (Geodon).

### Clinical Advisory on Monitoring Antipsychotic Medications:

- Ordering labs and monitoring should be tailored to each patient. Patients may require more or less monitoring than these recommendations.
- Geriatric patients may require more frequent monitoring due to changes in metabolism and renal function.
- Obtain baseline assessment for Tardive Dyskinesia and Abnormal Involuntary Movement Scale prior to initiate of antipsychotic and every 6 months.
- Atypical antipsychotics are associated with abnormal blood work such as elevated serum glucose and lipid levels, and increased prolactin levels. They are also associated with weight gain, increased risk of type 2 diabetes, diabetic ketoacidosis, and cardiovascular side effects.
- Avoid using Ziprasidone (Geodon), Haloperidol (Haldol), Thioridazine (Mellaril), and Chlorpromazine (Thorazine) in patients with known history of QT<sub>c</sub> prolongation, recent Acute Myocardial Infarction, uncompensated heart failure, taking other medications with prolong QT, and alcoholic patients on diuretics or having diarrhea which may alter electrolytes.
- All patients should be assessed for cardiovascular disease before initiating antipsychotic therapy.
- Refer to TEVA Clozaril Registry for monitoring Clozaril.
- An initial comprehensive baseline assessment should include a thorough personal and family medical history, including risk factors for diabetes, vital signs, weight, body mass index, waist circumference, metabolic laboratory analysis such as fasting glucose, and lipid profile.
- Fasting blood glucose is preferred, but HgA<sub>1c</sub> is acceptable if fasting glucose test is not feasible.
- Neutropenia uncommonly occurs in patients taking antipsychotic medications. It is recommended to obtain baseline Complete Blood Count and annually.

- Patients with a history of a clinically significant low white blood cell count (WBC) or a drug-induced leukopenia/neutropenia should have their complete blood count (CBC) monitored frequently during the first few months of therapy and discontinuation of medication should be considered at the first sign of a clinically significant decline in WBC in the absence of other causative factors (package insert).

## **Quality Improvement Project: Improving the Use of Psychotropic Medication among Children and Youth in Foster Care**

The Department of Social Services (CDSS), in collaboration with stakeholders, developed measures to track youth in foster care who received a paid claim for psychotropic medication from the California Department of Health Care Services. These measures will be publicly posted with the goal of improving the health and well-being of youth in care. Select measures have been added to this tool. Please see link provided for complete list.

<https://www.dhcs.ca.gov/provgovpart/pharmacy/Pages/qip-foster-care.aspx>