

## STABLE Performance Measure

<p><b>Measure:</b> Bipolar Disorder: Monitoring lithium serum levels</p>	
<p><b>Summary:</b> This measure assesses the percentage of patients diagnosed with bipolar disorder and treated with lithium who have evidence of a lithium serum medication level within 12 weeks of beginning treatment.</p>	
<p><b>Clinical Rationale:</b></p> <p><b>Side Effects of Lithium</b></p> <ul style="list-style-type: none"> <li>▪ Up to 75% of patients on lithium experience some side effects, but most are minor (polyuria; polydipsia, weight gain, cognitive problems, sedation or lethargy) and can be reduced or eliminated by dose adjustment or dosage schedule<sup>(1)</sup></li> <li>▪ Tremor affects up to 65% of patients treated with lithium and a severe tremor may be a sign of toxicity. Nausea and diarrhea or blurred vision may also be side effects of toxicity<sup>(1,2)</sup></li> </ul> <p><b>Lithium Levels</b></p> <ul style="list-style-type: none"> <li>▪ Target lithium levels are generally 0.8-1.1 mmol/L<sup>(3)</sup></li> <li>▪ Serum concentrations of 0.5 to 1.2 meq/L may be therapeutic according to individual patient response and side effects<sup>(1)</sup></li> <li>▪ Patients can experience toxic effects with levels above 1.5 meq/L such as marked tremor, nausea and diarrhea, or blurred vision; levels above 2.0 meq/L are have been associated with life-threatening side effects, such as neurotoxicity, delirium and encephalopathy<sup>(1,2)</sup></li> </ul> <p><b>Monitoring of Serum Lithium Levels</b></p> <ul style="list-style-type: none"> <li>▪ Lithium level monitoring is required due to the medication's narrow therapeutic index<sup>(1,2)</sup></li> <li>▪ Check lithium level after initial dosage and after each dosage increase<sup>(1)</sup></li> <li>▪ It is recommended to obtain serum levels approximately 5 days after a dosage adjustment as this is when the steady state is reached<sup>(1,3)</sup></li> <li>▪ Long-term monitoring recommendations are to check every 3-6 months in patients with stable lithium levels and whenever the clinical status changes<sup>(1,3)</sup></li> </ul>	
<p><b>Denominator Population:</b></p> <p>Patients diagnosed and treated for bipolar disorder with a lithium agent</p> <p><b>Data Sources:</b></p> <ul style="list-style-type: none"> <li>▪ Administrative data</li> <li>▪ Medical Record</li> </ul>	<p><b>Numerator Population:</b></p> <p>Patients with a serum medication level within 12 weeks of beginning treatment with lithium</p> <p><b>Data Source:</b></p> <ul style="list-style-type: none"> <li>▪ Medical Record</li> </ul>
<p><b>Initial Case-finding Guidance:</b> Patients with a diagnosis involving bipolar disorder ICD9CM or DSM IV TR: 296.0x; 296.1x; 296.4x; 296.5x; 296.6x; 296.7; 296.80-82; 296.89; or 301.13</p>	
<p><b>References:</b></p> <ol style="list-style-type: none"> <li>1. Practice Guideline for the Treatment of Patients with Bipolar Disorder (2002 Revision); American Psychiatric Association; Am J Psychiatry 159:4, April 2002 Supplement</li> <li>2. Freeman M, Freeman S, Lithium: Clinical Considerations in Internal Medicine, The American Journal of Medicine (2006) 119, 478-481</li> <li>3. Yatham LN, Kennedy, SH, et al.; Canadian Network for Mood and Anxiety Treatments (CANMAT) guidelines for the managements of patients with bipolar disorder: consensus and controversies, Bipolar Disorders 2005; 7(Suppl. 3): 5-69</li> </ol>	

## STABLE Performance Measure

**Measure:**

Bipolar Disorder: Monitoring lithium serum levels

**Measure Specifications:****Denominator:**

Patients 18 years of age or older with an initial or new episode of bipolar disorder

AND

Documentation of a diagnosis involving bipolar disorder; to include at least one of the following:

- Codes 296.0x; 296.1x; 296.4x; 296.5x; 296.6x; 296.7; 296.80; 296.81; 296.82; 296.89; 301.13 documented in body of chart, such as a pre-printed form completed by a clinician and/or codes documented in chart notes/forms
- Diagnosis or impression documented in chart indicating bipolar disorder
- Use of a screening/assessment tool for bipolar disorder with a score or conclusion that patient has bipolar disorder and indication that this information is used to establish or substantiate the diagnosis

AND

Documentation of treatment with a lithium (lithium carbonate; lithium citrate)

**Denominator Exclusion:**

Exclude case from denominator population if clinician requests patient to obtain serum lithium level but then subsequently documents that the patient failed to comply with clinician request.

**Numerator:**

Documentation of reference to serum blood levels in chart must include;

- Documentation that serum blood levels were requested

AND

- Results, or information about results, were obtained and placed/documentated in the patient record

AND

**Timeframe:**

Documented results or narrative reference to results are recorded within 12 weeks of date of first order for lithium