OBJECTIVES: Atypical antipsychotics (AA) (e.g., olanzapine, risperidone) in combination with mood stabilizers (MS) (e.g., lithium, valproate) have demonstrated better treatment response in acute bipolar mania compared with MS monotherapy, and may be better tolerated than conventional antipsychotics (e.g., haloperidol). However, their acquisition costs are relatively high. The objective of this study was to assess the cost-effectiveness of AA in combination with MS in acute bipolar mania.

METHODS: We developed a state-transition Markov model to estimate the cost-effectiveness of combination therapy with AA + MS in acute bipolar mania. The inception cohort consists of patients hospitalized with a new episode of acute mania. Each patient may receive: olanzapine + MS, risperidone + MS, haloperidol + MS, lithium monotherapy, or valproate monotherapy as initial therapy. Over subsequent 3-week cycles, patients initiated on each therapy may remain manic, become depressed, die from suicide or other causes, or stabilize and enter the continuation/maintenance phase of treatment. While in each health state, patients accumulate medical-care costs (for drugs, hospitalization, etc.) and utility associated with that state. The model tracks patients’ state transitions over 24 weeks and tabulates cumulative costs and utilities over the patients’ lifetime (discounted at an annual rate of 3%) to estimate incremental cost per quality-adjusted life-year (QALY) gained. Transition probabilities between states were estimated from published literature; costs were derived from standard sources; utilities were assessed using the standard gamble method.

RESULTS: Haloperidol + MS is the least costly therapy option, while risperidone + MS is the most effective. Risperidone + MS costs an additional $3300, and olanzapine + MS an additional $8700, per QALY gained versus haloperidol + MS. Both AA + MS combinations were cost saving versus monotherapy with lithium or valproate. Results were sensitive to drug costs, drug efficacy, suicide rate, and rate of tardive dyskinesia.

CONCLUSIONS: Based on current evidence, combination therapy with AA + MS is cost-effective versus haloperidol + MS in the treatment of acute mania, and dominates MS monotherapy.