

## WHO-CHOICE summary: BIPOLAR DISORDER

### Aim / purpose

To estimate the prevalence/incidence, case fatality, duration/remission and disability associated with bipolar affective disorder in different world regions under the situation of no health care interventions (null scenario), and then assess the impact of key clinical interventions (mood-stabilising drugs, with or without psychosocial treatment) in reducing the burden of bipolar disorder.

### Definition

Bipolar affective disorder is an ICD-10 mental disorder characterised by at least two episodes involving clinically significant disturbed mood, energy and activity.

### Population model

Intervention effectiveness was determined via a state transition population model (PopMod). Key transition rates include the incidence of bipolar disorder in the population, case-fatality and remission (defined as full recovery of a case). In addition, a disability weight is specified for time spent in different mood states.

People with bipolar disorder are modelled to live in one of three health states: (a) manic episodes, (b) depressive episodes or (c) relatively euthymic health states during which persons are non-symptomatic or symptomatic below the threshold of a manic or depressive episode. In this model, treatment has two effects: (a) a change in the distribution of time spent in each state; and (b) a change in the case-fatality rate (reduced suicide). Interventions have *no* effect on rates of incidence (i.e. onset of bipolar disorder is not prevented) or remission (i.e. the average duration of a case is not reduced).

Population-level treatment outcomes are expressed in terms of Disability Adjusted Life Years (DALYs) averted.

### Interventions

Hospital- and community-based delivery of two generic mood-stabilisers (lithium and valproic acid), alone and in combination with psychosocial treatment, were modelled.

### Costs

Two service models were evaluated, a hospital-based inpatient model and a community-based outpatient model. Patient-level resource inputs for an 'average' bipolar disorder patient were weighted according to time spent in manic, depressed or intermittent states. Total population-costs, expressed in international dollars, include health care contacts, drugs and diagnostic tests as well as administration and training.

### Results

Baseline results showed lithium to be no more costly yet more effective than valproic acid, assuming an anti-suicidal effect for lithium but not for valproic acid. Community-based treatment with lithium and psychosocial care was most cost-effective (cost per DALY averted: I\$ 2,165-6,475 in developing sub-regions; I\$ 5,487-21,123 in developed sub-regions).

### Conclusion

Community-based interventions for bipolar disorder were estimated to be more efficient than hospital-based services, each DALY averted costing between one and three times average gross national income.

### Reference

Chisholm D, Van Ommeren M, Ayuso-Mateos JL, Saxena S (2005). Cost-effectiveness of clinical interventions for reducing the burden of bipolar disorder. *British Journal of Psychiatry*, 187 (6).