Management of bipolar disorder

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Description of condition and intervention

Bipolar disorder is a mental health disorder, characterised by episodes of major depression, mania or both concurrently. This disorder frequently disrupts the day-to-day activities like mood, sleep, cognition, and behaviour in those affected. This condition also carries the risk of suicide in approximately 10 to 15 per cent of bipolar patients (Hawton, Heeringen 2009). Treatment involves pharmacotherapy along with adjunctive psychotherapy for better treatment and patient outcomes. Choice of psychotherapy is based on individual patient needs, preferences, and feasibility of provision of psychotherapy. Regarding pharmacotherapy, lithium, carbamazepine, valproate, and second-generation psychotics may be used to treat mania/hypomania. In absence of mania, monotherapy with first generation medications like quetiapine or lurasidone may be indicated. Source: UpToDate accessed on 22 August 2021.

We assess the effect and cost of the following intervention being analyzed in FairChoices: DCP Analytical tool:

> *Basic psychosocial treatment, advice, and follow-up for bipolar disorder, plus mood-stabilizing medication*

International guidelines

Organization	Indications/recommendations	Applicability in LIC & Lower MIC settings
World Health Organization	mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings: mental health Gap Action Programme (mhGAP)	Yes

Source: WHO 2016

Intervention attributes

Type of interventions

Curative

Delivery platform

This intervention may be delivered as part of routine care services predominantly at health centre level.

Equity

In addition to considerations like cost-effectiveness and health systems factors, dimensions of equity can be relevant for priority setting. The opportunity for a long and healthy life varies according to the severity of a health condition that individuals might have, so there are inequities in individuals' opportunities for long and healthy lives based on the health conditions they face. Metrics used to estimate the severity of illness at an individual level can be used to help prioritize those with less opportunity for lifetime health. FairChoices: DCP Analytics Tool uses Health adjusted age of death (HAAD), which is a metric that estimates the number of years lived from birth to death, discounting years lived with disability. A high HAAD thus represents a disease less severe in terms of lifetime health loss, while a low HAAD represents a disease that is severe on average, causing early death or a long period of severe disability. It is also possible to estimate the distribution of HAAD across individuals with a health condition. FairChoices shows for each intervention an average HAAD value of the conditions that are affected by respective interventions that have health effects. Additionally, a plot shows HAAD values for around 290 conditions (Johansson KA et al 2020).

Basic & Intensive psychosocial treatment

bipolar disorders
(DCP4 ID: MENTD04)
Cluster: Mental & substance use disorders

Time dependence

Moderate level of urgency. Treatment outcomes may be affected by some days of delay.

Population in need of interventions

Intervention taxonomy	Treated population & treated fraction	Affected population & affected fraction	Epidemiological Indicator
Basic psychosocial treatment, advice, and follow-up for bipolar disorder, plus mood-stabilizing medication	20 years and above population; 1 (prevalent cases)	20 years and above population; 100% of treated population with the bipolar disorder 20 years and above population; 0.37 of affected fraction for self-harm	Prevalence of bipolar disorder Prevalence of self-harm

Disease state addressed

Primary disease state addressed by this intervention is bipolar disorder.

Intervention effect and safety

Table 1: Effect and safety of basic & intensive psychosocial treatment for bipolar disorder

Effect of intervention		Certainty of evidence
Mortality (due to condition) For self-harm	0.465 reduction in Case fatality rate from Onehealth tool Population attribution fraction for bipolar for self-harm=5.4% Net reduction=46.5%*5.4%=2.5%	See appendix
Disability	Impact on disability/function with the intervention: 10.4% reduction	

EVIDENCE BRIEF

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FairChoices
DCP Analytic Tool

Model assumptions

Table 2: Summary of model parameters and values used in FairChoices – DCP Analytical Tool

Category	Model parameter	Notes
Interventions	Basic & intensive psychosocial treatment for bipolar disorders	We assume similar effect of intervention for basic and intensive treatments
Cost parameters		
Treated population	Based on prevalence of bipolar disorders	Global Burden of Disease study 2019
Gender	Both male & female	
Age	20-99 years	
Treated fraction	1	Assumed
Effect parameters		
Affected population	Those with condition	
Affected gender	Both male & female	
Affected fraction age	20 to 99 years	
Affected fraction for disability reduction for bipolar disorders Affected fraction for mortality reduction for self-harm attributable to bipolar disorders	1 0.37	Ferrari 2014
Comparison	No intervention	
Mortality Reduction (RRR**) Basic psychosocial treatment	0.025	See table 1
Disability Reduction (RRR) Basic psychosocial treatment	0.104	OneHealth tool

Intervention cost

The unit cost for managing bipolar disorder using generic mood-stabilizing medications and psychosocial treatment is estimated to be USD 651.5 for low-income countries in 2005. The cost is based on the estimates by Chisholm et al. 2005 that provided estimates for cost per treated case (I$ per year) the management of bipolar disorders using a community-based service model to deliver Valproic acid and psychosocial treatment.

References

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Appendix

Literature Review for effectiveness & safety

This literature search is an example of Level 1 search for intervention inputs taken from DCP3 or generated in an ad hoc manner (e.g., quick google search found one study of cervical cancer screening cost-effectiveness that was used to create an effectiveness parameter for that intervention).

Level of evidence of efficacy studies:

1. low (expert opinions, case series, reports, low-quality case control studies)
2. moderate (high quality case control studies, low quality cohort studies)
3. high (high quality cohort studies, individual RCTs)
4. very high (multiple RCTs, meta-analysis, systematic review, clinical practice guidelines)