Health Outcomes & Patient Evaluation in Bipolar Disorder (HOPE.BD): A Canadian Prospective Study

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BACKGROUND[1]

- Bipolar Disorder (BD) is generally an episodic, lifelong illness with a variable course. The first episiode of BD may be manic, hypomanic, mixed, or depressive. According to DSM-IV criteria, patients with BD Type I have had at least one episiode of mania. Patients meeting criteria for BD Type II have a history of major depressive episiodes and hypomanic episiodes only.
- Bipolar Type I disorder affects approximately 0.8% of the adult population, with estimates from community sampling ranging from between 0.45% and 1.6%, affecting men and women fairly equally. Bipolar Type II disorder affects approximately 0.5% of the population and is apparently more common in women. These estimates of prevalence are considered conservative.
- Bipolar disorder causes substantial psychosocial morbidity, frequently affecting patients' relationships with spouses and partners, children, family members as well as occupation. It is estimated that as many as 60% of people diagnosed with BD-I experience chronic interpersonal or occupational difficulties and subclinical symptoms between acute episiodes.

RATIONALE

- There are many unanswered questions surrounding the human, social and economic costs of BD in Canada. Research is needed to establish the demographic, diagnostic and treatment factors associated with important outcomes such as euthymia, behavioural decline, suicide and health resource utilization.
- This study prospectively examines treatment patterns in bipolar disorder across Canada, for those patients under the care of a psychiatrist. Regional variations will be explored when and where appropriate.
- The focus of this publication is to present initial demographic and subject history.

METHOD

- A prospective cohort study design involving a combination of University and Community hospitals/clinics from across Canada is currently enrolling 200 patients per study year with a target goal of 1000 patients over a 4-5 year period.
- Patients will be managed under conditions of routine clinical psychiatric practice in the context of accepted Canadian guidelines.
- With the patients' consent, data will be collected for at least a one-year follow-up period and entered into a computer database designed for psychiatric disorders.
- Community and health resource utilization will be collected through a home diary completed monthly by the patient.

RESULTS

- The study began recruiting in April 2002 and currently has 14 active sites. As of March 2003, there were 145 patients enrolled from which data is available for 126.
- Mean age at study entry is 43.5 years (SD 13.5, range 18-80 yrs.) for the 75 females and 44.2 years (SD 11.9, range 20-72 yrs.), for the 54 males. Caucasians constitute 92% of the population, Asians 3% and Blacks 1%.
- Household income of less than $40k was indicated by 54% of subjects, 24% had $40k - $69.9k, 8% between $70 - $99.9k and 9% above $100k.
- Half of the subjects have children (49% BD-I & 55% BD-II) but only 24% reported that the children lived with them (8.7% unknown).
- Table 1 outlines basic demographic details for the subjects recruited thus far. Almost 3/4 have greater than high school education but appear to suffer from a high unemployment rate (22%). Approximately 25% have broken marriages.
- Although suicidality is higher in BD Type II (40.9%), it is not statistically different from the 28.0% in Type I (Figure 1).
- The proportion of subjects reporting prior substance abuse is relatively low in this population with overall rates ranging from 4% for opiates to 23% for alcohol (Table 2).
- A family history of mental health illness is the only parameter that demonstrates an association with bipolar disorder ($p = 0.071$, Figure 2).
- Hypomanic and depressive episiodes are significantly ($p < 0.05$) more prevalent in BD-II versus BD-I (Table 3).
- Mean patient age at the time of professional diagnosis was lower in Type I versus Type II (35 vs. 41 yrs., $p < 0.05$) however the mean age at time of first psychiatric admission was sooner in Type II disorder (18 vs. 29 yrs., $p < 0.05$, Table 4).

Table 1. Demographics by Bipolar Type

Parameter	Bipolar I N	Bipolar I %	Bipolar II N	Bipolar II %	ALL N	ALL %
Sex						
Female	45	54.9	26	59.1	71	56.3
Male	37	45.1	18	40.9	55	43.7
Marital Status						
Unmarried	26	31.7	16	36.4	42	33.3
Married	18	22	17	38.6	35	27.8
Living together	11	13.4	4	9.1	15	11.9
Divorced	18	22	4	9.1	22	17.5
Separated	6	7.3	3	6.8	9	7.1
Widowed	1	1.2	na	na	1	0.8
Unknown	2	2.4	na	na	2	1.6
Education						
Less than High School	11	13.4	9	20.5	20	15.9
High School Graduate	7	8.5	4	9.1	11	8.7
College	20	24.4	9	20.5	29	23
Some University	15	18.3	7	15.9	22	17.5
Univ. Grad or post-graduate	26	31.7	15	34.1	41	32.5
Unknown	3	3.7	na	na	3	2.4
Working Status						
Full-time	26	31.7	13	29.5	39	31
Part-time	12	14.6	5	11.4	17	13.5
Housewife/-man	na	na	2	4.5	2	1.6
Unemployed	18	22	10	22.7	28	22.2
Studying	5	6.1	2	4.5	7	5.6
Retired	9	11	3	6.8	12	9.5
Other/Unknown	12	14.6	9	20.5	21	16.7

Figure 1. History of Suicidality

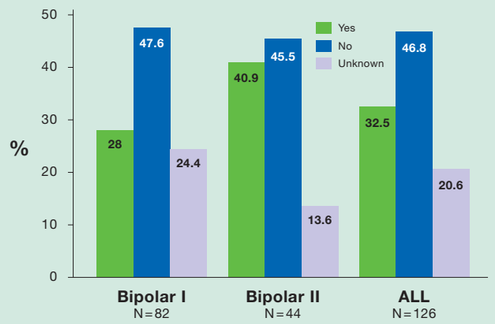
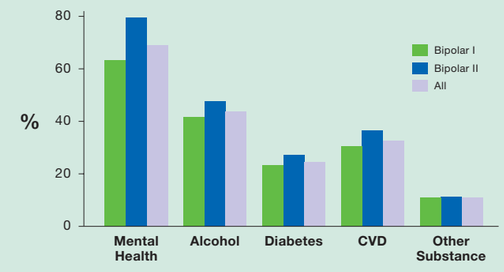


Figure 2. Family History



CVD = Cardiovascular Disease

Table 2. Prior Substance Use/Abuse by Bipolar Disorder Type

Substance	Bipolar I N	Bipolar I %	Bipolar II N	Bipolar II %	ALL N	ALL %
Alcohol						
No	17	20.7	9	20.5	26	20.6
Use	27	32.9	18	40.9	45	35.7
Abuse	18	22	11	25	29	23
Unknown	20	24.4	6	13.6	26	20.6
Stimulants						
No	47	57.3	27	61.4	74	58.7
Use	10	12.2	8	18.2	18	14.3
Abuse	5	6.1	3	6.8	8	6.3
Uknown	20	24.4	6	13.6	26	20.6
Cannabis						
No	28	34.1	22	50	50	39.7
Use	23	28	11	25	34	27
Abuse	11	13.4	5	11.4	16	12.7
Uknown	20	24.4	6	13.6	26	20.6
Opiates						
No	53	64.6	32	72.7	85	67.5
Use	5	6.1	5	11.4	10	7.9
Abuse	4	4.9	1	2.3	5	4
Uknown	20	24.4	6	13.6	26	20.6

Table 3. Onset and Course of Illness

	Bipolar I N	Bipolar I Mean	Bipolar I STD	Bipolar II N	Bipolar II Mean	Bipolar II STD	ALL N	ALL Mean	ALL STD
Hospital Admissions for BD	62	1.2	1.4	38	0.5	1.1	100	0.9	1.3
Hypomanic Episiodes	62	1.9	6.0	37	6.7	10.9	99	3.7	8.5
Manic Episiodes	62	0.7	1.2	38	0	0.16	100	0.5	1.0
Depressive Episiodes	62	2.2	2.9	37	6.2	10.6	99	3.7	7.1
Phsycotic Episiodes	62	0.1	0.4	38	0.1	0.32	100	0.1	0.3

Table 4. History of Illness by Bipolar Disorder Type

	Bipolar I N	Bipolar I Mean	Bipolar I STD	Bipolar II N	Bipolar II Mean	Bipolar II STD	ALL N	ALL Mean	ALL STD
At what age was professional help first sought for bipolar disorder symptoms?	62	30	13.5	38	31	11.4	100	30	12.7
At what age was there a professional diagnosis of bipolar disorder?	62	35	12.4	38	41	10.9	100	37	12.2
At what age did the subject first try a mood stabilizing (bipolar) medication?	62	34	13	38	38	13	100	36	13
At what age was the subject's first psychiatric admission?	62	29	16.4	37	18	19.9	99	25	18.4

CONCLUSIONS

- This is the first Canada wide, prospective observational study to rigorously examine bipolar disorder.
- The burden of bipolar disorder on society and patients is demonstrated by the early age of onset, high levels of unemployment/suicide/substance abuse and the chronic nature of the disease.
- This "practice based" approach is a useful tool for exploring relationships between relevant patient types, and will provide a means of elucidating the effectiveness of different treatment strategies and economic parameters in BD in Canada.

REFERENCES

1. Supplement to The American Journal of Psychiatry. Practice Guideline for the Treatment of Patients with Bipolar Disorder (Revision). Volumn 159, Number 4, April 2002.

OTHER STUDY SITES

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