Original Research

Recurrence Rates in Ontario Physicians Monitored for Major Depression and Bipolar Disorder

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Objective: Physicians with recurrent conditions that may affect job performance are sometimes referred for monitoring to help ensure compliance with treatment, ongoing remission of illness, and patient safety. Little is known about recurrence rates among doctors monitored for mood disorders. Our primary objective was to describe recurrence rates among Ontario physicians monitored for recurrent unipolar depression and bipolar disorder (BD). Our secondary objective was to explore predictors of recurrence.

Method: We used a retrospective cohort design to describe the time to recurrence, defined as either stopping work due to symptoms or any re-emergence of symptoms meeting a pre-established clinical threshold. Our exploratory analysis of recurrence predictors included age, sex, psychiatric diagnosis, psychiatric comorbidity, medical comorbidity, number of past episodes, past hospitalizations, and family history of psychiatric disorder.

Results: During a median observation of 24 months, 36% (of 50) stopped work due to recurrence and 52% (of 50) physicians had a re-emergence of clinical symptoms. The median time to stopping work due to recurrence was 11 months and the median time to any level of symptom re-emergence was 13 months. Physicians with psychiatric comorbidity stopped work sooner (hazard ratio [HR] 3.53; 95% CI 1.24 to 10.03) and had more rapid symptom re-emergence (HR 2.96; 95% CI 1.34 to 6.52) than those without comorbidity. The most common psychiatric comorbidity was a Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition anxiety disorder.

Conclusion: Recurrence rates are high among Ontario physicians referred for formal monitoring of recurrent unipolar depression and BD, and are markedly hastened by the presence of psychiatric comorbidity.

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Clinical Implications

- Physicians referred for monitoring of recurrent major depression or BD have high recurrence rates, which are hastened in the presence of psychiatric comorbidity.
- Monitoring programs and those involved in the care of doctors with recurrent mood disorders may wish to give special consideration to the duration and intensity of follow-up, particularly when there is psychiatric comorbidity.
- A better understanding of the relation between the symptoms of mood disorders and doctor's workplace functioning is needed.

Limitations

- Regulatory policies in Ontario influenced the composition of our study population, which may limit applicability to other monitoring programs.
- While psychiatric comorbidity predicted recurrence, our study was likely underpowered to detect other plausible predictors.
- The external validity of our study would have been improved if validated scales had supplemented clinical consensus to define remission and recurrence.

Key Words: *physician health, occupational health, depression, bipolar disorder*

In the province of Ontario, physicians with recurrent conditions that may affect job performance are sometimes referred by medical regulators and others for monitoring to help ensure compliance with treatment, ongoing remission of illness, and patient safety.[1–4] Some form of monitoring program exists in Canada and the United States.[5] Historically, the vast majority (over 80%) of physicians referred to monitoring programs have been diagnosed with substance use disorders, but an increasing number are now referred for recurrent mood disorders, because of workplace concerns.[5] For this population, there is very little long-term data and evidence to guide monitoring decisions.[2,5–7]

In Ontario, monitored physicians who have been off work due to their illness must demonstrate a full clinical and functional recovery before being deemed suitable to return to work. Monitoring then involves reports from the monitored physician's treating clinician, a workplace monitor, and regular interviews by the monitoring program to assess progress and compliance with recommended treatment.[2] It seems intuitive that this strict selection process would ensure low recurrence rates, particularly compared with the general population managed in specialty centres for mood disorders where 2-year recurrence rates have been estimated in the 50% range.[8,9] We conducted a retrospective cohort study of Ontario physicians participating in a monitoring program with primary diagnoses of recurrent unipolar depression or BD. Our primary objective was to describe recurrence rates, defined either as stopping work due to symptoms or as the re-emergence of any clinical symptoms. Our secondary objective was to explore predictors of recurrence.

Methods

Our study was approved by the Research Ethics Board of the University of Ottawa Institute of Mental Health Research. Study participants included any physician who entered the physician health monitoring program of the Ontario Medical Association between January 1, 2001 and June 1, 2007 with a DSM-IV diagnosis of BD or recurrent MDD. Participants with a comorbid diagnosis of substance dependence were excluded. Independent assessors certified in psychiatry by the Royal College of Physicians and Surgeons of Canada assigned diagnoses. As part of the monitoring program, all participants had to achieve a clinical and functional remission as determined by the treating clinician with input from the monitoring program and the workplace. Participants were assessed at least monthly by trained, clinical monitors. We were interested in 2 primary outcomes, the time to stopping work due to symptoms and the re-emergence of any clinical symptoms. We defined stopping work as 2 or more consecutive weeks away from work due to recurrent symptoms. Symptom re-emergence was defined using the monitoring program's 3-level clinical definition of recurrence (Level 1 to 3). Level 1 recurrence indicates mild psychiatric symptoms lasting at least 1 week, not meeting full DSM-IV criteria for MDD, hypomania, or mania, and not raising workplace safety concerns. This information is communicated to the treating psychiatrist who reassesses the participant, when possible, within a week. Level 2 recurrence denotes moderate to severe psychiatric symptoms, meeting DSM-IV criteria for MDD, mania, or hypomania. This determination is made in conjunction with the treating psychiatrist and leads to an increased intensity of monitoring and treatment. It does not automatically involve a 'stop-work' mandate. Level 3 recurrence is recorded when any member of the monitoring team observes a clinical recurrence and expresses concerns that the participant is not safe to practice medicine. This triggers an automatic request to stop work, and may involve regulatory reporting, urgent psychiatric treatment, and emergency assessment. Our recurrence predictors included age; sex; DSM-IV diagnosis of recurrent unipolar depression, compared with BD; psychiatric comorbidity; medical comorbidity; number of previous episodes; previous psychiatric hospitalizations; and family history of psychiatric illness. Data was abstracted from clinical files by 2 independent assessors. We used life table analysis to describe time to stopping work and time to symptom re-emergence. We used the Cox proportional hazards model to test predictors.[10] All analyses were done using SAS version 9.1 (SAS Institute Inc, Cary, NC).

Abbreviations used in this article

BD	bipolar disorder
DSM	Diagnostic and Statistical Manual of Mental Disorders
HR	hazard ratio
MDD	major depressive disorder

Results

Overall, 50 of 272 monitored participants in the physician health program met our inclusion criteria. We excluded 197 participants who did not have a diagnosis of recurrent mood disorder and 23 participants with recurrent MDD or BD with a comorbid substance dependence disorder. Two (excluded) participants did not have any psychiatric diagnosis. The age, sex, and specialty distributions of included physicians approximated the general population of doctors in the province of Ontario. Characteristics of our study cohort are summarized in Table 1. During a mean observation period of 25

Table 1 Characteristics of physicians monitored for BD or recurrent unipolar depression

Cohort characteristics	Study cohort (%) (*n* = 50)
Sex	
Male	32 (64)
Female	18 (36)
Age, years, mean (SD)	43.8 (11.0)
range	(24–68)
Medical specialty	
Family medicine	26 (52)
Psychiatry	9 (18)
Internal medicine[a]	4 (8)
Resident	5 (10)
Obstetrics	3 (6)
Pathology	1 (2)
Surgery	1 (2)
Radiology	1 (2)
Referral source	
Mandated by institution or regulatory agency	50 (100)
DSM-IV diagnosis	
MDD (recurrent, unipolar)	25 (50)
Bipolar disorder type I or II	25 (50)
Bipolar subtypes:	11 (44)
Bipolar type I	14 (66)
Bipolar type II	—
Lifetime episodes, mean (SD)	3.3 (1.7)
median (range)	4 (2–7)
Time since initial diagnosis, years, mean (SD)	10.0 (7.4)
range	(1–38)
Total duration of monitoring, months, mean (SD)	25 (13.2)
median (range)	24 (6–54)
Psychiatric comorbidity (includes multiple diagnoses)	20 (40)
Medical comorbidity (includes multiple diagnoses)	18 (36)
Family history of psychiatric illness	24 (48)
Ever hospitalized for psychiatric illness	24 (48)
Symptomatic recurrence while monitored	27 (54)
Off work while monitored	16 (32)

[a] Includes rheumatology, gastroenterology, neurology

months, 52% (of 50) physicians had some degree of recurrence as defined by the monitoring program, with a median time of 13 months to any symptomatic re-emergence. Among recurrences, 32% were rated as Level 1, 64% Level 2, and 4% Level 3. All physicians who were classified as having mild symptoms (Level 1) continued to work while monitored and treated for their psychiatric condition. No participants with Level 2 or Level 3 relapse continued working while monitored.

From the time of enrolment in the monitoring program, the median time to stopping work was 11 months, and 36% (18 of 50) of physicians stopped work due to recurrence. The mean time off work was 4 months (SD 2.8; range 1 to 10; median 3.0) and the mean time between first reports of notable symptoms and stopping work was 1 month (SD 1.4, range 0 to 5; median 0.75 months). Psychiatric comorbidity predicted stopping work earlier (HR = 3.53; 95% CI 1.24 to 10.03). The median time to stopping work among physicians with comorbidity was 8 months; among physicians assigned only one psychiatric diagnosis, the median time to stopping work was 12 months (Figure 1).

Psychiatric comorbidity also predicted a shorter time to any level of symptom recurrence (HR = 2.96; 95% CI 1.34 to 6.52) (Table 2). The median time to symptom re-emergence was 7 months in physicians with psychiatric comorbidity, in contrast to 31 months in those without comorbidity. Comorbidity as a predictor for earlier recurrence was robust to sensitivity analysis.

Neither diagnostic subgroup, age, sex, prior number of episodes, a history of psychiatric hospitalization, medical comorbidity, or family history of psychiatric illness significantly predicted time to symptom relapse or stopping work (Table 2).

Discussion

Similar to reports from the general psychiatric population with recurrent mood disorders, recurrence rates were high among monitored physicians, and were markedly hastened among doctors with a psychiatric comorbidity.[2,11–13] This contrasts with the 15% 2-year relapse rate for Ontario physicians in mandatory monitoring for substance use disorders without a concurrent mood disorder.[5]

Unlike monitoring for substance use, where biochemical measures can define relapse, monitoring doctors with severe, recurrent mood disorders raises unique challenges, since there is no biochemical test for remission, symptoms may wax and wane even with full treatment compliance, and the relation between symptoms and workplace impairment is not well understood.[3,14] Research linking psychiatric symptom severity and functional impairment in doctors is beginning to

Figure 1 Time to stopping work due to symptoms of BD or recurrent unipolar depression. The median time to stopping work among physicians with comorbidity was 8 months; among physicians assigned only 1 psychiatric diagnosis, the median time to stopping work was 12 months

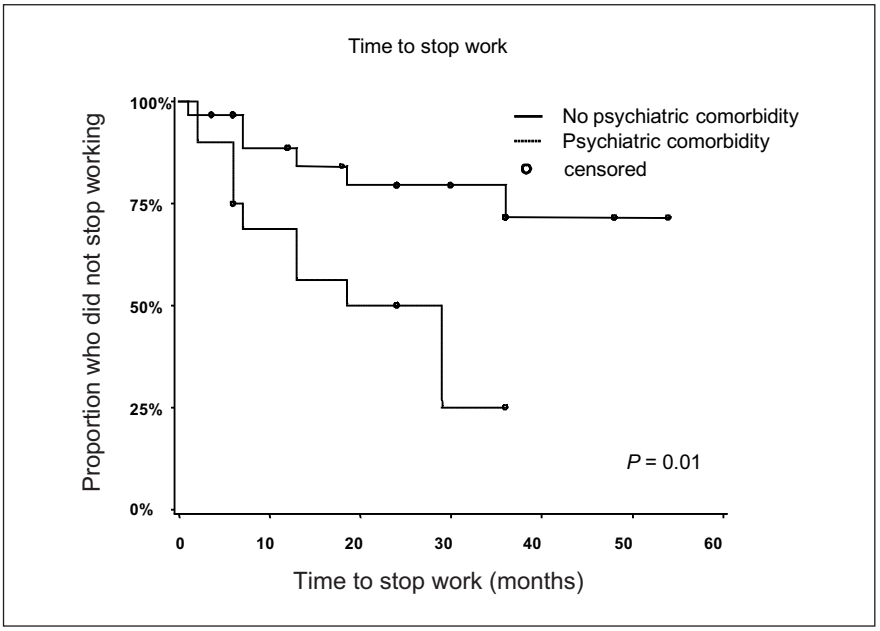

Table 2 Exploratory analysis, predictors of recurrence, and stopping work, Cox proportional hazards model. Psychiatric comorbidity predicted earlier symptomatic recurrence (*P* = 0.004) and a shorter time to stopping work (*P* = 0.01). Psychiatric comorbidity was more common in patients diagnosed with recurrent unipolar depression (56%) than among those diagnosed with BD (24%) (*P* = 0.04, 2-sided *t* test)

	Time to any recurrence		Time to stopping work	
Characteristic	HR (95% CI)	*P*	HR (95% CI)	*P*
Age	1.05 (1.01–1.09)	0.02	0.99 (0.95–1.04)	0.67
Female sex	0.74 (0.32–1.71)	0.48	0.83 (0.29–2.4)	0.73
Recurrent unipolar depression, compared with BD	2.00 (0.91–4.41)	0.09	2.23 (0.77–6.48)	0.14
Bipolar type I, compared with recurrent unipolar depression	0.49 (0.16–1.47)	0.2	0.44 (0.1–2.01)	0.29
Bipolar type II, compared with recurrent unipolar depression	0.51 (0.2–1.3)	0.16	0.45 (0.13–1.64)	0.23
Psychiatric comorbidity	2.96 (1.34–6.52)	0.004	3.53 (1.24–10.03)	0.01
Medical comorbidity	1.01 (0.47–2.19)	0.97	0.87 (0.31–2.39)	0.78
Number of past episodes	0.96 (0.76–1.21)	0.74	1.19 (0.88–1.6)	0.25
Past psychiatric hospitalization	0.95 (0.44–2.06)	0.89	1.04 (0.39–2.8)	0.93
Family history of psychiatric illness	0.60 (0.28–1.29)	0.19	0.55 (0.2–1.53)	0.25

emerge, with preliminary evidence that severe depressive symptoms, analogous to our level 2 relapse, can adversely affect patient care.[4] About one-third of our monitored doctors stopped work due to their mood disorder, an average of one month after symptoms were first recorded. Did these physicians modify their workloads during this time? Based on our limited data, we cannot comment on this, since we were interested in stopping work, not in modified work, which may have been a reasonable option in the weeks leading up to a full clinical recurrence.

Finally, our small cohort represents only 0.25% of the more than 22 000 doctors in Ontario. If general population estimates can be applied to physicians, it is likely that most doctors with severe, recurrent mood disorders have not come to regulatory attention and are not in formalized monitoring.[15] Little is known about the best way for these doctors to balance the personal challenges of their recurrent condition with a professional responsibility to deliver consistent, high quality patient care.

Limitations

The external validity of our study would have been improved if validated scales had supplemented clinical consensus to define remission and recurrence.[12,16] Also, our study was likely underpowered to detect relapse predictors other than comorbidity.[17]

Conclusion

Recurrence rates for physicians referred for monitoring of recurrent depression or BD are high, and are markedly hastened by the presence of a psychiatric comorbidity. Monitoring programs and others involved in the treatment of physicians with highly recurrent mood disorders may wish to give special consideration to the intensity and duration of follow-up, particularly when there is a psychiatric comorbidity.

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