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 owing 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% (18 of 50) of physicians stopped work owing to recurrence of symptoms, with the median time to stopping work being 11 months. As well, 52% (26 of 50) had a re-emergence of clinical symptoms, with the median time to any level of symptom re-emergence being 13 months. Physicians with psychiatric comorbidity stopped work sooner (hazard ratio [HR] 3.53; 95% CI 1.24 to 10.03, \( P = 0.01 \)) and had more rapid symptom re-emergence (HR 2.96; 95% CI 1.34 to 6.52, \( P = 0.004 \)) 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.


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.
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 most Canadian provinces and in most of 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.\(^3\)–\(^5\)–\(^7\)

In Ontario, monitored physicians who have been off work owing 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.\(^7\) 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 owing 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 owing to symptoms and the re-emergence of any clinical symptoms. We defined stopping work as 2 or more consecutive weeks away from work owing 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).

**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

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

**Abbreviations used in this article**

- BD: bipolar disorder
- DSM: Diagnostic and Statistical Manual of Mental Disorders
- HR: hazard ratio
- MDD: major depressive disorder
summarized in Table 1. During a mean observation period of 25 months, 52% (26 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 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 owing 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 0.75 months). Psychiatric comorbidity predicted stopping work earlier (HR = 3.53; 95% CI 1.24 to 10.03, P = 0.01). 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, P = 0.004) (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. 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; as 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...
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).

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Time to any recurrence</th>
<th>Time to stopping work</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>HR (95% CI)</td>
<td>$P$</td>
</tr>
<tr>
<td>Age</td>
<td>1.05 (1.01–1.09)</td>
<td>0.02</td>
</tr>
<tr>
<td>Female sex</td>
<td>0.74 (0.32–1.71)</td>
<td>0.48</td>
</tr>
<tr>
<td>Recurrent unipolar depression, compared with BD</td>
<td>2.00 (0.91–4.41)</td>
<td>0.09</td>
</tr>
<tr>
<td>BD I, compared with recurrent unipolar depression</td>
<td>0.49 (0.16–1.47)</td>
<td>0.2</td>
</tr>
<tr>
<td>BD II, compared with recurrent unipolar depression</td>
<td>0.51 (0.2–1.3)</td>
<td>0.16</td>
</tr>
<tr>
<td>Psychiatric comorbidity</td>
<td>2.96 (1.34–6.52)</td>
<td>0.004</td>
</tr>
<tr>
<td>Medical comorbidity</td>
<td>1.01 (0.47–2.19)</td>
<td>0.97</td>
</tr>
<tr>
<td>Number of past episodes</td>
<td>0.96 (0.76–1.21)</td>
<td>0.74</td>
</tr>
<tr>
<td>Past psychiatric hospitalization</td>
<td>0.95 (0.44–2.06)</td>
<td>0.89</td>
</tr>
<tr>
<td>Family history of psychiatric illness</td>
<td>0.60 (0.28–1.29)</td>
<td>0.19</td>
</tr>
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Figure 1 Time to stopping work owing 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.
severity and functional impairment in doctors is beginning to emerge, with preliminary evidence that severe depressive symptoms, analogous to our level 2 relapse, can adversely affect patient care. About one-third of our monitored doctors stopped work owing to their mood disorder, an average of 1 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, as 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 receiving formalized monitoring. 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. Also, our study was likely underpowered to detect relapse predictors other than comorbidity.

**Conclusion**

Recurrence rates for physicians referred for monitoring of recurrent unipolar 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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**References**


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Résumé : Les taux de rechute chez des médecins ontariens surveillés pour dépression majeure et trouble bipolaire

Objectif : Des médecins souffrant de maladies épidémiques qui peuvent affecter leur rendement professionnel sont parfois soumis à une surveillance pour assurer l’observance au traitement, la rémission de la maladie, et la sécurité des patients. Il y a peu de données sur les taux de rechute chez les médecins suivis pour troubles affectifs. Notre objectif principal était de décrire les taux de rechute chez des médecins ontariens surveillés pour dépression unipolaire récurrente et trouble bipolaire (TB). Notre objectif secondaire était d’explorer les prédicteurs de rechute.

Méthode : Nous avons utilisé une étude de cohorte rétrospective pour décrire le délai jusqu’à la rechute, définie comme étant soit un arrêt de travail attribuable aux symptômes, soit toute réapparition des symptômes correspondant à un seuil clinique prédéfini. Notre analyse exploratoire des prédicteurs de rechute comprenait l’âge, le sexe, le diagnostic psychiatrique, la comorbidité psychiatrique, le nombre d’épisodes antérieurs, les hospitalisations passées, et les antécédents familiaux de troubles psychiatriques.

Résultats : Durant une observation médiane de 24 mois, 36 % (18 sur 50) des médecins ont arrêté de travailler en raison d’une rechute des symptômes, le temps médian jusqu’à l’arrêt de travail étant de 11 mois. De même, 52 % (26 sur 50) ont eu une rechute des symptômes cliniques, et le temps médian jusqu’à tout niveau de rechute des symptômes était de 13 mois. Les médecins souffrant de comorbidité psychiatrique arrêtaient le travail plus tôt (risque relatif de [RR] 3,53; IC à 95 % 1,24 à 10,03, P = 0,01) et la réapparition de symptômes était plus rapide pour eux (RR 2,96; IC à 95 % 1,34 à 6,52, P = 0,004) que pour ceux sans comorbidité. La comorbidité psychiatrique la plus fréquente était le trouble anxieux tel que défini dans la 4e édition du Manuel diagnostique et statistique des troubles mentaux.

Conclusion : Les taux de rechute sont élevés chez des médecins ontariens soumis à une surveillance de la dépression unipolaire et du TB récurrents, et la rechute est précipitée en présence de comorbidité psychiatrique.