

Addressing Tobacco Dependence in Psychiatric Practice: Promises and Pitfalls

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The 2 In Review papers in this issue of *The Canadian Journal of Psychiatry* focus on tobacco use in mental health and addictive (MHA) populations, which is timely, given the high rates of tobacco use (primarily through cigarette smoking) in MHA settings and the difficulties with smoking cessation that are well documented for MHA patients.^{1–3} The sobering fact is that in 2009 the primary cause of death in MHA populations is tobacco-related medical illness, such as cardiovascular disease, chronic obstructive pulmonary disease, and lung cancer, and their lives are substantially shorter than the general public in great part owing to tobacco use.^{4–7}

The first article, by Dr Dominique Morisano, Dr Ingrid Bacher, Dr Janet Audrain-McGovern, and Dr Tony George,⁸ reviews biobehavioural, psychological, and social and (or) environmental determinants of tobacco comorbidity in MHA populations. Converging lines of evidence in the past 20 years indicate that having an MHA diagnosis appears to be a vulnerability factor for the initiation and maintenance of tobacco use and tobacco dependence (TD). Moreover, there is some limited evidence in some mental health disorders (for example, schizophrenia and major depressive disorder [MDD]) that nicotine, the major component of tobacco that leads to drug reinforcement, may actually produce beneficial effects, such as remediation of cognitive deficits in people with schizophrenia^{9–11} and improvement of depressive symptoms in MDD.^{12–14} There are also other explanations for the high rates of TD in these populations, including vulnerability to addiction and enhanced nicotine withdrawal. Clearly more research is needed on this topic. Accordingly, increased knowledge about the role of nicotinic receptors and pathways in MHA disorders has the potential to be translated into novel and more effective treatments, both for the MHA disorders and for comorbid tobacco addiction in these patients, who bear a disproportionate burden of the economic, social, and health care costs associated with tobacco addiction.¹⁵

The second article, by Dr Brian Hitsman, Ms Taryn D Moss, Dr Ivan D Montoya, and Dr George,¹⁶ describes an evidence-based approach to, and available clinical research data supporting the use of, pharmacological and behavioural interventions for TD treatment in MHA populations. Clearly such treatment is best done in an integrated setting where both treatment for the MHA disorder and the comorbid tobacco addiction are done by the same clinicians in the same facility.^{17,18} In addition, these populations appear to benefit from integrated treatment that includes psychosocial and pharmacological treatments. However, most studies in treatment-seeking MHA smokers have been of a small sample size, and performed at a single site, typically in an academic tertiary health care setting. This has led to limited progress in this field insofar as developing treatments for widespread dissemination and implementation in community settings, where most MHA smokers are managed. A growing number of studies have confirmed that while cessation rates are low, tobacco reduction and cessation in MHA smokers is possible, and in fact some of the more recent studies in smokers with schizophrenia,^{19,20} which have used optimized treatment strategies, including nicotine replacement therapies, sustained-release bupropion, and cognitive-behavioural and motivational therapies, have produced short- and long-term (6 month) quit rates that approach those in noncomorbid smokers.²¹ Further, while TD is considered a chronic illness, studies that have examined extended treatments in MHA populations are rare. However, one recent study¹⁷ in smokers with a history of MDD achieved very high long-term cessation rates (about 50%) with extended treatment of up to a 1-year duration. Clearly we need to consider maintenance treatments for MHA and other smokers who initially respond to treatment, and provide ongoing treatment support for those who do not initially quit, as success is often seen in smokers who initially reduce but do not quit, as an eventual transition toward abstinence, which may in fact be a more realistic approach to tobacco treatment in these smokers.²²

One major challenge in implementing tobacco treatment relates to policies that govern the environment within which we treat these patients. Most MHA facilities have attempted to restrict or enforce an outright ban on the possession and use of tobacco products in their facilities. However, this has proven to be difficult for numerous reasons. Tobacco use is typically part of the culture of MHA settings, and there is often resistance to changing this culture by patients, their families, and staff and physicians, who believe that this is an important right for patients,²³ as it gives them social and psychiatric benefits (facilitates socialization, and reduces boredom and medication side effects¹), and serves as part of the token economy that is often characteristic in chronic institutional settings. This clearly conflicts with health promotion efforts in the institutional setting. The recent exemptions to tobacco bans in public institutions that have been granted to extended care facilities (including nursing homes, psychiatric hospitals, and drug treatment facilities) send a mixed message to patients, families, and staff who work in these settings, and may in fact perpetuate a double stigma as our patients already suffer considerable stigma in living with their mental illness or addictions. The corollary is that when we allow patients to smoke in facilities where they are treated (and often reside in while receiving long-term treatment), it suggests that institutions and governments do not fully recognize the risks of long-term tobacco addiction in MHA patients. There is considerable evidence that implementation of tobacco bans in these settings is practical and achievable, and with proper behavioural and pharmacological supports to manage tobacco withdrawal and cravings, combined with linkage to outpatient tobacco treatment services, the implementation of tobacco-free MHA treatment settings is possible and necessary.²⁴ Organizational change efforts are needed, including effective leadership and clear goals for the patients, staff, and environment. Tactics to achieve the goals can be spelled out in a strategic plan that includes improving treatment planning, services for lower and higher motivated patients, training for staff and administrators, recovery resources for staff and administrators who are smokers themselves, and clear environmental policies and changes to support a smoke-free environment. There is guidance in the literature about how institutional tobacco policy changes can be achieved.^{24,25}

Tobacco comorbidity is clearly an important problem for psychiatry, and it is hoped that this series will encourage psychiatrists and other mental health professionals to become skilled in identifying tobacco use and initiating treatment, given that this is seldom done by these providers.^{26,27} The safety of tobacco interventions in this population has been

documented,^{20,28,29} and given that TD appears to be a treatable chronic disorder to which most of our MHA patients will eventually succumb, continuing research into the determinants of tobacco and MHA comorbidity and treatment approaches should be a priority for governments and health research funding agencies in the future.

References

1. Kalman D, Morrisette SB, George TP. Co-morbidity of smoking with psychiatric and substance use disorders. *Am J Addict.* 2005;14:106–123.
2. Lasser K, Boyd JW, Woolhander S, et al. Smoking and mental illness: a population-based prevalence study. *JAMA.* 2000;284:2606–2610.
3. Ziedonis D, Hitsman B, Beckham JC, et al. Tobacco use cessation in psychiatric disorders: National Institute of Mental Health (NIMH) report. *Nicotine Tob Res.* 2008;10:1691–1715.
4. Hennekens CH, Hennekens AR, Hollar D, et al. Schizophrenia and increased risk of cardiovascular disease. *Am Heart J.* 2005;150:1115–1121.
5. Hser YI, McCarthy WJ, Anglin MD. Tobacco use as a distal predictor of mortality among long-term narcotic addicts. *Prev Med.* 1994;23:61–69.
6. Brown S, Inskip H, Barraclough B. Causes of excess mortality in schizophrenia. *Br J Psychiatry.* 2000;177:212–217.
7. Hurt RD, Offord KP, Croghan IT, et al. Mortality following inpatient addictions treatment. Role of tobacco use in a community-based cohort. *JAMA.* 1996;275:1097–1103.
8. Morisano D, Bacher I, Audrain-McGovern J, et al. Mechanisms underlying the comorbidity of tobacco use in mental health and addictive disorders. *Can J Psychiatry.* 2009;54(6):356–367.
9. Adler LE, Hoffer LD, Wiser A, et al. Normalization of auditory physiology by cigarette smoking in schizophrenic patients. *Am J Psychiatry.* 1993;150:1856–1861.
10. George TP, Termine A, Sacco KA, et al. Effects of cigarette smoking on prepulse inhibition in schizophrenia: involvement of nicotinic receptor mechanisms. *Schizophr Res.* 2006;87:307–315.
11. Sacco KA, Termine A, Seyal AA, et al. Effects of cigarette smoking function on spatial working memory and attentional function in schizophrenia: involvement of nicotinic receptor mechanisms. *Arch Gen Psychiatry.* 2005;62:649–659.
12. George TP, Vessicchio JC, Sacco KA, et al. Nicotinic antagonist augmentation of SSRI antidepressants in major depressive disorder: a preliminary study. *J Clin Psychopharmacol.* 2008;28:340–344.
13. Salin-Pascual RJ, Rosas M, Jimenez-Genchi A, et al. Antidepressant effect of transdermal nicotine patches in non-smoking patients with major depression. *J Clin Psychiatry.* 1996;57:387–389.
14. Thorsteinsson HS, Gillin JC, Patten CA, et al. The effects of transdermal nicotine therapy for smoking cessation on depressive symptoms in patients with major depression. *Neuropsychopharmacology.* 2001;24:350–358.
15. Williams JM. Eliminating tobacco use in mental health facilities: patients' rights, public health, and policy issues. *JAMA.* 2008;299:571–573.
16. Hitsman B, Moss TG, Montoya ID, et al. Treatment of tobacco dependence in mental health and addictive disorders. *Can J Psychiatry.* 2009;54(6):368–378.
17. Hall SM, Humfleet GL, Reus VI, et al. Extended nortriptyline and psychological treatment for cigarette smoking. *Am J Psychiatry.* 2004;161:2100–2107.
18. McFall M, Saxon AJ, Thompson CE, et al. Improving the rates of quitting smoking for veterans with posttraumatic stress disorder. *Am J Psychiatry.* 2005;162:1311–1319.
19. Evins AE, Cather C, Culhane MA, et al. A 12-week double-blind, placebo-controlled study of bupropion added to high-dose dual nicotine replacement therapy for smoking cessation or reduction in schizophrenia. *J Clin Psychopharmacol.* 2007;27:380–386.
20. George TP, Vessicchio JC, Sacco KA, et al. A placebo-controlled trial of bupropion combined with nicotine patch for smoking cessation in schizophrenia. *Biol Psychiatry.* 2008;63:1092–1096.
21. Le Foll B, George TP. Treatment of tobacco dependence: integrating recent progress into practice. *CMAJ.* 2007;177:1373–1380.
22. McChargue DE, Gulliver SB, Hitsman B. Would smokers with schizophrenia benefit from a more flexible approach to smoking treatment? *Addiction.* 2002;97:785–793.
23. Appelbaum PS. Do hospitalized patients have a right to smoke? *Psychiatr Serv.* 1995;46:653–654.
24. Lawn S, Pols R. Smoking bans in psychiatric inpatient settings? A review of the research. *Aust N Z J Psychiatry.* 2005;39:866–885.

25. Ziedonis DM, Zammarelli L, Seward G, et al. Addressing tobacco use through organizational change: a case study of an addiction treatment organization. *J Psychoactive Drugs*. 2007;39:451–459.
26. Himelhoch S, Daumit G. To whom do psychiatrists offer smoking cessation counseling? *Am J Psychiatry*. 2003;160:2228–2230.
27. Montoya ID, Herbeck DM, Sviks DS, et al. Identification and treatment of patients with nicotine problems in routine clinical psychiatry practice. *Am J Addict*. 2005;14:441–454.
28. Chengappa KN, Kambhampati RK, Perkins K, et al. Bupropion sustained-release as a smoking cessation treatment in remitted depressed patients maintained on treatment with selective serotonin reuptake inhibitors. *J Clin Psychiatry*. 2001;62:503–508.
29. Weinberger AH, Vessicchio JC, Sacco KA, et al. A preliminary study of sustained-release bupropion for smoking cessation in bipolar disorder. *J Clin Psychopharmacol*. 2008;28:584–587.

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