



Published in final edited form as:

J Am Psychiatr Nurses Assoc. 2009 December 1; 15(6): 404–409. doi:10.1177/1078390309355318.

Ten Critical Reasons for Treating Tobacco Dependence in Inpatient Psychiatry

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Keywords

tobacco dependence; treatment; clinical practice; inpatient; psychiatry

Lawn and Pols reviewed 26 studies of inpatient psychiatry units reporting on the effectiveness of smoking bans and concluded (1) there were few problems, and (2) staff often anticipated far more problems than actually occurred (Lawn & Pols, 2005). Consistency, coordination, and full administrative support were identified as key elements to success. Units with partial, rather than complete, smoking bans were more likely to experience difficulties.

The National Association of State Mental Health Program Directors Research Institute defines a complete smoking ban as one where “smoking is prohibited on all facility premises (indoors and outside). There are no designated smoking areas on the campus; the facility is totally a smoke-free campus. The policy applies to clients, visitors, and employees” (Lane, Werdel, Schacht, Ortiz, & Parks, 2009). In the US, fewer than half (41%) of state psychiatric hospitals have instituted complete smoking bans (Lane et al., 2009).

In this issue, Crockford et al. examined the impact of opening a smoking room following a partial smoking ban in an acute care inpatient psychiatry unit. The ban was partial because patients were still allowed off the unit with passes to smoke, often on the hospital grounds despite rules to the contrary. A striking 48% of off-unit passes were granted explicitly for smoking, including among patients of questionable psychiatric stability.

Creation of the smoking room was largely endorsed by the clinical staff who reported it improved their safety, increased their time to discuss patient psychiatric issues, and enhanced the development of patient rapport. Systematic chart review prior to and following implementation of the smoking room, however, indicated no reduction in incidents of aggression, use of seclusion or restraint, or security involvement on the unit. The smoking room was eventually closed to comply with the hospital-wide smoking ban.

Of minimal mention in the article was attention to treatment of patients’ tobacco dependence in this inpatient psychiatry setting. Crockford et al. reported the unit did not have any protocols in place for treating patients’ tobacco dependence, and patients had to complain of nicotine withdrawal to be offered nicotine replacement therapy (NRT). Not surprisingly, use of NRT was exceedingly low both prior to (13%) and following (16%) opening of the smoking room. No mention was made of staff advising patients to quit smoking, assessing their readiness to quit smoking, providing assistance with quitting smoking, or arranging follow-up care post-hospitalization – all recommended components of clinical practice for the treatment of tobacco

dependence (American Psychiatric Association, 2006; Fiore, Jaén, & Baker, 2008). A separate survey study conducted in 2004–2005 in the same hospital with 211 psychiatric inpatients reported 49% were interested in quitting smoking and 36% intended to quit in the next 30 days (Soly, Crockford, White, & Currie, 2009). A minority of patients, however, reported being advised to quit smoking or offered smoking cessation treatments by their physician or nursing staff.

The failure to treat patients' tobacco dependence in inpatient psychiatry is not unique to this unit and has been documented previously (Lawn & Pols, 2005; Prochaska, Fletcher, Hall, & Hall, 2006; Prochaska, Gill, & Hall, 2004). Despite clinical practice guidelines, treatment of patients' nicotine dependence in inpatient psychiatry remains rare. A myopic focus on eradicating secondhand smoke exposure has resulted in clinical neglect of patients' nicotine withdrawal and dependence with negative effects on patient outcomes.

This editorial identifies ten critical reasons for treating tobacco dependence in inpatient psychiatry. The reasons, supported by empirical evidence, include both consideration of the health of the patients we serve as well as liability risks to the systems in which we work. If the major improvements in patient morbidity and mortality are not enough motivation for change, it is hoped that the major financial costs that can be averted will be.

(1) Treating tobacco dependence is central to addressing the disproportionate morbidity and mortality among people with serious mental illness

Individuals with serious mental illness are dying, on average, 25 years prematurely with the leading causes of death being chronic tobacco-related diseases (Colton & Manderscheid, 2006). Patients with mental illness are at elevated risk for cardiovascular disease, pulmonary disease, and some cancers relative to age-matched controls with the increased risks attributed to the high rates of tobacco use (Carney & Jones, 2006; Lichtermann, Ekelund, Pukkala, Tanskanen, & Lonnqvist, 2001; Ruschena et al., 1998). Tobacco use is the leading preventable cause of death among individuals with mental illness, estimated to account for 179,000 deaths annually (Lasser et al., 2000; U.S. Department of Health and Human Services, 2000). Critically, quitting smoking brings immediate health benefits in cardiovascular and pulmonary functioning. The earlier smokers quit, the greater the health benefits, but gains in quality and quantity of life are obtained at any age (Doll, Peto, Boreham, & Sutherland, 2004).

(2) Smoke-free inpatient psychiatry settings provide an ideal window of opportunity for initiating tobacco treatment services, motivating patients to quit, and supporting them with staying tobacco-free once they leave the hospital

When complete smoking bans are in place, inpatient psychiatric stays offer the opportunity for patients to experience life without tobacco. Removed from the cues to smoke, and with access to NRT, many patients are surprised by how well they can manage without smoking. Mental health providers are ideally positioned to treat tobacco dependence. They are able to combine psychopharmacological and behavioral/counseling treatment, often are trained in substance abuse treatment, and are able to identify and address any changes in psychiatric symptoms during the withdrawal period. Alternatively, failure to treat patients' tobacco use will increase the likelihood that smoking-bans are perceived as punitive rather than therapeutic. Most smokers understand that tobacco is seriously harmful to their health, and they expect clinicians to address their tobacco use with them (Barzilai, Goodwin, Zyzanski, & Stange, 2001). Failure to do so may inadvertently communicate that quitting is not important or that their life is not worth saving.

(3) Tobacco use negatively impacts mental health treatment

Failure to address hospitalized psychiatric patients' nicotine withdrawal through use of NRT is associated with a two-fold higher against medical advice (AMA) discharge rate relative to smokers who are prescribed NRT and relative to nonsmokers (Prochaska, Gill et al., 2004). In XXXX et al.'s study, the significantly higher AMA rate among smokers (7%) versus nonsmokers (1%), $\chi^2=4.78$, $p<.05$, irrespective of the existence of the smoking room, may reflect inadequate management of patients' nicotine withdrawal.

Tobacco smoke also interacts with psychiatric medications, inducing the drug metabolism resulting in lower blood levels, and likely less therapeutic effects (Zevin & Benowitz, 1999). Psychiatric medications that may have a *decreased effect* due to the induction of CYP1A2 by polycyclic aromatic hydrocarbons in tobacco smoke include: clozapine, fluvoxamine, haloperidol, olanzapine, phenothiazines, propranolol, tertiary TCAs/cyclobenzaprine, and thiothixene. The effect can be as high as an increased clearance of 40–98% for olanzapine, a costly medication. Paradoxically, some mental health settings use cigarettes as an incentive to get patients to take their medications.

(4) Evidence-based treatments are available

Clinical Practice Guidelines of the American Psychiatric Association and the US Preventive Health Service recommend that all patients be screened for tobacco use, advised to quit, and offered intervention, including pharmacological treatment for quitting smoking, unless contraindicated (American Psychiatric Association, 2006; Fiore et al., 2008). Evidence-based treatments include: clinician advice (which doubles the likelihood of patients' quitting); formal smoking cessation programs in the form of individual counseling, telephone counseling, or group programs; and pharmacotherapy (NRT, bupropion, varenicline, nortriptyline, clonidine). Our research indicates that a majority of inpatient psychiatry patients report never having been advised to quit smoking by a mental health provider, despite repeated clinical contacts (Prochaska et al., 2006). Other patients have reported encouragement from clinicians to continue smoking to manage their stress and/or maintain sobriety. Our current tobacco treatment clinical trial in inpatient psychiatry is showing high interest in tobacco cessation treatment with 79% of hospitalized smokers recruited (Prochaska, Hall, & Hall, 2009).

(5) Our clients can quit smoking and without adverse effect to their mental health recovery

In a trial with 322 smokers with clinical depression, tobacco cessation rates for the intervention group exceeded those of control participants at months 12 (20% vs. 12%) and 18 (25% vs. 19%) (Hall et al., 2006). Follow-up analyses of 10 psychiatric indicators, including depression symptoms, suicidality, psychiatric hospitalization, and use of alcohol and illicit drugs, found no detriment to mental health recovery among individuals who quit smoking as compared to continued smokers (Prochaska et al., 2008). In a trial with smokers in treatment for post-traumatic stress disorder (PTSD), participants assigned to integrated care were five times more likely than participants undergoing usual care to be abstinent from smoking at 9 months follow-up (McFall et al., 2006). Critically, treatment for tobacco dependence was not associated with worsening PTSD symptoms. A trial examining bupropion versus placebo for tobacco cessation with smokers diagnosed with schizophrenia found significant differences in quit rates while participants were taking the active drug (Evins, Cather et al., 2005). Abstinence from tobacco was not associated with worsening of attention, verbal learning/memory, working memory, or executive function/inhibition nor worsening of clinical symptoms in individuals with schizophrenia (Evins, Deckersbach et al., 2005). Increasing evidence indicates that individuals with psychiatric disorders can be aided in quitting smoking and without threat to their mental health recovery. Integration of tobacco cessation treatment within psychiatric settings is encouraged so that clinicians can identify and address nicotine withdrawal and any changes in psychiatric symptoms during the quit attempt.

(6) Quitting smoking supports recovery from other addictions

Quitting smoking is associated with improved sobriety from other addictions (Bobo, McIlvain, Lando, Walker, & Leed-Kelly, 1998; Hughes, 1993; Shoptaw, Jarvik, Ling, & Rawson, 1996), while continued smoking is associated with worse drug treatment outcomes (Frosch, Shoptaw, Nahom, & Jarvik, 2000). In a 12-month prospective study, clients in addictions treatment who quit smoking were less likely to be diagnosed as alcohol dependent and had significantly greater total days of abstinence from alcohol and illicit drugs compared to those who remained smokers (Kohn, Tsoh, & Weisner, 2003). Further, clinical treatment of patients' tobacco dependence may enhance addiction treatment outcomes. Our meta-analysis of 19 randomized controlled trials evaluating tobacco treatment interventions for individuals with substance abuse problems found that smoking cessation interventions were associated with a 25% increased likelihood of long-term abstinence from alcohol and illicit drugs (Prochaska, Delucchi, & Hall, 2004). Tobacco dependence interventions during addictions treatment appear to enhance rather than compromise long-term sobriety.

(7) Treating patients' tobacco dependence can save staff time

In psychiatry inpatient settings that permit tobacco use on or off the unit, staff time in managing the smoking culture is estimated at up to 4 hours per day and includes getting cigarettes, giving cigarettes, lighting cigarettes, managing patient disputes over cigarettes, cleaning up cigarettes, and observing patient smoking on or off the unit (Barzilai et al., 2001). In Crockford et al.'s analysis, staff reported discussing off unit smoking privileges an average of 13 minutes per patient. Clinician time spent dispensing and lighting cigarettes and overseeing the smoking room was not reported. Ideally this clinical time could be shifted to counseling patients to quit smoking and supporting their efforts to remain smoke-free after hospital discharge.

A medication sheet that standardizes the protocol for offering NRT to all smokers who become hospitalized can be implemented in under 5 minutes per patient. Integrating tobacco treatment into on-unit addiction groups (i.e., treating "Alcohol, Tobacco and Other Drugs") is an immediate change in practice that can increase clinical attention to patients' tobacco dependence without additional staff time or cost. Nicotine Anonymous meetings can be brought into the inpatient psychiatry setting as another cost-effective way to provide added support to patients with the quitting process.

(8) Failure to treat tobacco dependence brings real liability risks

In psychiatry inpatient settings that permit smoking, liability risks include: secondhand smoke (SHS) exposure to patients, visitors, and staff; fires; patient fights over cigarettes and violence toward staff; and risk of relapse to smoking or smoking initiation among staff and hospitalized patients. A smoking room will expose nonsmoking patients and staff to SHS. According to the Americans for NonSmokers' Rights organization: "No ventilation system has ever been designed that can protect the public from the death and disease caused by exposure to secondhand smoke" (Americans for NonSmokers Rights, 2008). The *Surgeon General's 2006 Report on the Health Consequences of Secondhand Smoke* concluded that (a) SHS has immediate adverse effects on the cardiovascular system; (b) SHS increases the risk for coronary heart disease and lung cancer; and (c) there is no safe level of second-hand smoke exposure. Nonsmoking employees in other industries have successfully sued their employers for failing to provide a smoke-free work environment. Inpatient psychiatry settings that do not ban smoking are vulnerable to similar lawsuits.

Fires destroy property and bring risk to patient and staff safety. Patient fights over cigarettes can be extreme. The Napa State psychiatric hospital, when it permitted smoking, reported a clinician was badly beaten by a patient wanting cigarettes and another patient was murdered

in a fight over tobacco (Herel, 2000; Lee, 2006). The hospital has since implemented a complete smoking ban.

Psychiatry inpatient settings that expose patients to tobacco use during a time of vulnerability increase the risk that patients will initiate or relapse to smoking. If these patients were to incur tobacco-related diseases, the hospital could be sued. Lastly, failure to follow recommended clinical practice, which includes treatment of tobacco dependence in hospitalized smokers, brings liability risks to a healthcare facility (Torrijos & Glantz, 2006).

(9) Failure to treat patients' tobacco dependence in inpatient psychiatry will result in patients returning to smoking soon after hospital discharge

In our 3-month observational study of 100 patients discharged from a psychiatry unit with a complete smoking ban but no formal treatment of tobacco dependence, 76% returned to smoking the same day as hospital discharge and all returned to smoking within 3 months of follow-up (Prochaska et al., 2006). Return to tobacco use will result in reduced blood levels of a number of psychiatric medications and may increase the risk of rehospitalization. Studies have reported greater hospitalization rates, higher medication dosages, and more positive symptoms among patients with schizophrenia who smoke relative to those who do not (Goff, Henderson, & Amico, 1992; Patkar et al., 2002; Ziedonis, Kosten, Glazer, & Frances, 1994). Although the relationship is unclear, in prospective studies with youth and adults, tobacco use is a major predictor of future suicidal behavior, independent of depressive symptoms, prior suicidal acts, and other substance use (Breslau, Schultz, Johnson, Peterson, & Davis, 2005; Oquendo et al., 2004; Potkin et al., 2003).

(10) Effectively treating patients' tobacco dependence can bring significant financial savings to patients and the health care system, money averted from the tobacco industry's profits

Often heavy smokers, the mentally ill comprise 44% to 46% of the US tobacco market (Grant, Hasin, Chou, Stinson, & Dawson, 2004; Lasser et al., 2000). In terms of dollars spent, this equates to 175 billion cigarettes and \$39 billion in annual tobacco sales (Federal Trade Commission, 2005). A study of outpatients diagnosed with schizophrenia estimated the monthly costs of smoking at \$142.40 or 27% of their monthly incomes (Steinberg, Williams, & Ziedonis, 2004). The cost to society of tobacco use is estimated at \$7.65 per pack of cigarettes sold (Centers for Disease Control and Prevention, 2002). In contrast, most of the smoking cessation pharmacotherapies (NRT, bupropion, varenicline) cost less than \$4.00 per day.

Strong evidence supports the cost-effectiveness of smoking cessation interventions for reducing smoking and disease. Implementation of the clinical practice guidelines are estimated to cost \$2587 per life-year saved (Cromwell, Bartosch, Fiore, Hasselblad, & Baker, 1997). Complete smoking bans also save money by eliminating tobacco-related cleaning costs (both litter and smoke-residue on furniture, carpets, curtains) and wasted staff time spent minding patients' smoking behavior. The costly liability risks discussed earlier also can be averted. In contrast, the tobacco industry is a deadly investment.

Discussion

The reasons for eliminating tobacco use and treating tobacco dependence in inpatient psychiatry settings extend beyond the ten identified here. If airlines, Laundromats, hotel chains, restaurants, bars, and casinos can ban tobacco use, then clearly inpatient psychiatry settings can take this important step to protect the health of patients, visitors, and staff. The barriers to eliminating tobacco use from psychiatric settings are surmountable and manageable. The potential benefits are overwhelming and unmatched.

Despite some clinicians' assertions of the therapeutic aspects of smoking, tobacco is not treatment (Robertson, 2000). Partial smoking bans that restrict patients to a certain number of cigarettes per day (typically less than 1 cigarette per hour) place patients' in a chronic state of nicotine withdrawal and increase the likelihood of agitation and aggression (Benowitz, 2008). Further, the likelihood of patient violence is increased as tobacco use is afforded by some but not all. Underground economies arise with patients selling cigarettes at exorbitant prices. NRT, which delivers nicotine in a steady state (patch) and as needed (gum, lozenge, inhaler, nasal spray) form, is a far more humane and sustained way to manage nicotine dependence and withdrawal in inpatient psychiatry settings.

Others have written on concrete steps that can be taken to treat tobacco dependence in addiction treatment settings (Ziedonis et al., 2007). The strategies include treatment of tobacco dependence in staff who smoke; staff training and supervision on treating tobacco dependence; standardized assessments of patient smoking status and readiness to change; inclusion of Nicotine Dependence and Withdrawal on the Axis I disorder list and treatment plan; standardized protocols for cessation pharmacotherapy; and having written, enforceable policies concerning smoke-free grounds and staff not giving any appearance of tobacco use (i.e., not smelling of smoke). Failure to diagnose the tobacco-related disorders is failure to acknowledge the leading preventable cause of death in our patient population. By adding Nicotine Dependence and Withdrawal on the Axis I disorder list (American Psychiatric Association, 1994), clinicians will increase the likelihood that tobacco treatment is included in the clinical treatment plan and addressed during the hospital stay. It also will serve to raise awareness among outpatient providers of the need to treat patients' tobacco dependence following hospital discharge.

Concern has been raised about the very high rate of tobacco use among individuals with mental illness. The high prevalence has been interpreted as evidence that these groups are genetically determined to smoke, need to smoke to manage their symptoms, and cannot quit. The failure of psychiatry to recognize tobacco dependence as an addiction and clinical disorder in need of treatment is rarely emphasized. If we wonder why our patients smoke at such high rates, we must look at the system level forces and treatment practices that have facilitated, encouraged, and maintained tobacco use in this vulnerable patient population. Ignoring or facilitating tobacco use is not consistent with the mission of a medical facility or its health care providers. To achieve real impact in addressing the health disparities our patients face due to tobacco-related diseases, we must change the practices in inpatient psychiatry to consistently implement complete smoking bans and provide evidence-based tobacco cessation treatments. That less than half of the US state psychiatric facilities have banned tobacco use is indication of how far our field and clinical practice have to go. The evidence is clear; the steps for change have been identified; it is time to take action.

Acknowledgments

This work was supported by the State of California Tobacco-Related Disease Research Program (#17RT-0077), the National Institute on Drug Abuse (#K23 DA018691 and #P50 DA09253), and the National Institute of Mental Health (#R01 MH083684). The author holds no conflict of interest.

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