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Smoke-Free State Psychiatric Facility Grounds: Is Legislation Necessary and Appropriate to Remove Tobacco from These Treatment Settings?

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I. INTRODUCTION

General hospitals and medical clinics have converted to smoke-free buildings and are increasingly converting their premises to smoke-free as a component of health promotion.¹ Accreditation requirements by the Joint Commission on Accreditation of Healthcare Organizations (“JCAHO”) prompted the nationwide conversion to smoke-free medical facility buildings in 1992.² Increasingly, state legislatures are passing state-wide smoking bans for workplaces, restaurants, and bars with no exemptions for separately ventilated rooms.³ Despite this widespread trend toward smoke-free public buildings and workplaces, many state and public psychiatric treatment facilities continue to support tobacco use on their premises by patients, staff, and visitors.⁴ Most state psychiatric facilities have moved smoking outdoors while some facilities even allow indoor smoking.⁵ Outdoor smoking allows non-smoking patients and staff to avoid the dangers of environmental tobacco smoke and qualifies these treatment facilities for JCAHO accreditation.⁶ This paper will examine the historic debate over maintaining tobacco availability within psychiatric facilities. Because opposition to tobacco-free state psychiatric facility grounds continues to exist, this author argues that the legislative process is necessary to make this change in a fair, effective, and efficient manner.

Advocates for keeping tobacco available base their arguments on a patient’s right to choose to smoke and on the historic, and commonly held, belief that forcing patients with mental illness to forego smoking—even while providing nicotine replacement—creates a potential harm.⁷ Some mental health professionals believe that preventing patients from smoking will likely create confrontations, agitation,

1. Richard D. Hurt et al., *The Making of a Smoke-Free Medical Center*, 261 JAMA 95, 95 (1989); see also Anne M. Joseph et al., *Determinants of Compliance with a National Smoke-Free Hospital Standard*, 274 JAMA 491, 492 (1995) (“Smoke-free hospital policies are designed to minimize patient, employee, and visitor exposure to secondhand smoke, encourage patients and employees to quit smoking and set an example for the community of institutional policies that reflect scientific knowledge about the health risks of smoking.”).
2. See JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS, COMPREHENSIVE ACCREDITATION MANUAL FOR HOSPITALS: THE OFFICIAL HANDBOOK (2005) (referring to Standard EC 1.30, which requires that “[t]he hospital develops and implements a policy to prohibit smoking except in specified circumstances”).
3. As of October 2, 2008, twenty-one states, including Puerto Rico, do not allow smoking in bars, and twenty-seven states, including Puerto Rico, do not allow smoking in restaurants. See Americans for Nonsmokers’ Rights Foundation, *States, Commonwealths, and Municipalities with 100% Smokefree Laws in Workplaces, Restaurants, and Bars* (Oct. 2, 2008), <http://www.no-smoke.org/pdf/100ordlist.pdf>.
4. State or public psychiatric facilities are operated and funded by states as agencies to provide treatment for mentally ill or chemically dependent citizens who are frequently involuntarily hospitalized according to state civil commitment statutory law.
5. See Kathleen M. Monihan et al., *A Comparative Analysis of Smoking Policies Among State Psychiatric Hospitals*, June 2006, http://www.nri-inc.org/reports_pubs/2006/SmokingPoliciesProceduresReport2006.pdf.
6. See *id.*
7. See Ilya Kagan et al., *Patient Rights and Law: Tobacco Smoking in Psychiatric Wards and the Israeli Prevention of Smoking Act*, 11 NURSING ETHICS 472 (2004); cf. NAT’L ASS’N STATE MENTAL HEALTH PROGRAM DIRS., TECHNICAL REPORT ON SMOKING POLICY AND TREATMENT IN STATE OPERATED PSYCHIATRIC FACILITIES 1, at 10 (Joseph Parks & Peggy Jewell eds., 2006),

and even violence.⁸ Smoking inside medical facilities, such as within locked psychiatric wards, is viewed as a means for patients to relax in times of distress, to ease their boredom, and to promote social interaction.⁹ Mental health professionals advocate for tobacco availability based on the hypothetical benefits of smoking on symptoms of schizophrenia, and the potential benefits of nicotine on cognitive functioning.¹⁰ Mental health professionals are trained to empathize with patients' suffering. This process of empathy involves an attempt to understand and imaginatively enter into another person's feelings. Thus, the cravings to use tobacco experienced by patients likely brings out a wish from the mental health professional to alleviate this uncomfortable feeling. It is understandable that mental health staff—lay and professionals alike—are reluctant to require a patient who is dependent on tobacco to forego its use upon admission to a psychiatric treatment facility. It appears counter-intuitive to require persons who suffer symptoms of a mental illness to stop smoking when they enter a treatment facility for worsened symptoms.¹¹ A smoker often assigns a meaning to his or her smoking that sometimes only becomes apparent after an attempt is made to stop smoking.¹² With the loss of smoking, a smoker may experience a feeling of loss similar to losing a reliable friend. For a smoker with a psychiatric illness, smoking may even take on a unique magical or ritualistic significance.¹³ Thus, mental health professionals anticipate a variety of concerns that result from restricting patients with mental illness from tobacco while treating their illness.

[hereinafter TECHNICAL REPORT ON SMOKING] available at http://www.nasmd.org/medicaid_mental/docs/NASMHPD_Technical_Report_on_Smoking_Policy.pdf.

8. Kagan et al., *supra* note 7, at 476. *But see* Wayne R. Smith & Brian L. Grant, *Effects of a Smoking Ban on a General Hospital Psychiatric Service*, 40 HOSP. & CMTY. PSYCHIATRY 497, 502 (1989) (“[D]espite dire predictions, the smoking ban produced fewer negative effects and more positive effects than both medical and nursing staff had anticipated.”).
9. *See* Kagan et al., *supra* note 7, at 474.
10. *See id.* *See generally* James B. Lohr & Kristen Flynn, *Smoking & Schizophrenia*, 8 SCHIZOPHRENIA RES. 93 (1992) (discussing smoking behavior and schizophrenia, explanations for and against whether smoking may alleviate or exacerbate symptoms, and medication side effects). One often stated hypothetical explanation for heavy smoking by individuals with schizophrenia is that the “increase in dopamine release induced by smoking may be helpful in alleviating some schizophrenic symptomatology” and “chronic smoking behavior may help alleviate schizophrenic symptoms.” *Id.* at 99.
11. The term *mental illness* has been defined as:
 [C]linically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with significantly increased risk of suffering death, pain, disability, or an important loss of freedom.
 AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS: DSM-IV-TR xxxi (4th ed. text rev. 2000) [hereinafter DSM-IV-TR].
12. *See* John S. Tamerin, *The Psychodynamics of Quitting Smoking in a Group*, 129 AM. J. PSYCHIATRY 589, 590–93 (1972).
13. *Cf.* Ann Marie Carosella et al., *Smoking Attitudes, Beliefs, and Readiness to Change Among Acute and Long Term Care Inpatients with Psychiatric Diagnoses*, 24 ADDICTIVE BEHAV. 331, 340 (1999).

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

The mental health treatment culture is steeped in the belief that tobacco must be available within psychiatric treatment settings to avoid aggression. Yet, careful examination of tobacco use and its removal from psychiatric treatment settings shows that tobacco's presence within the treatment milieu plays a pivotal role in the level of aggression within these milieus. As more public psychiatric treatment facilities ban tobacco use from their grounds, long-held beliefs that removing tobacco will create undue stress and even aggression are fading. Clinical observations and data from these public psychiatric facilities demonstrate decreased patient aggression and decreased staff injuries when tobacco is removed.¹⁴ This new data concerning the effect of tobacco use on the course and treatment of mental illness, provides a compelling argument for removing all tobacco from psychiatric treatment facilities.

Historically, the mental health community has needed more persuasive arguments than the well-known detrimental health effects of tobacco to justify removing tobacco from psychiatric treatment settings.¹⁵ Concerns based on the unique nature of mental illness and the special circumstances surrounding psychiatric hospitalization are voiced by mental health professionals who advocate for maintaining tobacco within treatment facilities.¹⁶ This paper will present data showing that keeping tobacco available in state psychiatric hospitals can be detrimental to the treatment of mental illness and has a high potential for creating harm in the form of increased aggression. This paper will also present information showing that those who suffer with mental illness do not experience worse symptoms or more suffering without access to tobacco while in the hospital setting. Thus, there is now a persuasive argument for removing tobacco that also speaks to the empathic mental health professional. Removing tobacco from the state psychiatric treatment facility creates a less aggression-prone treatment milieu and facilitates a higher likelihood for more effective treatment. Despite these compelling arguments, however, efforts to keep tobacco available within psychiatric treatment facilities present serious hurdles to successful implementation of a tobacco ban.¹⁷ Accordingly, support of the legislature is vital to ensure that a tobacco ban is successfully levied.

This article examines the controversy surrounding smoking in psychiatric institutions. Section II will acquaint the reader with the history of tobacco use within

14. See Anthony G. Hempel et al., *Effect of a Total Smoking Ban in a Maximum Security Psychiatric Hospital*, 20 BEHAV. SCI. & L. 507 (2002); John Quinn et al., *Results of the Conversion to a Tobacco-Free Environment in a State Psychiatric Hospital*, 27 ADMIN. & POL'Y MENTAL HEALTH 451 (2000).

15. See Center for Disease Control, *History of the Surgeon General's Reports on Smoking and Health*, Feb. 28, 2007, http://www.cdc.gov/tobacco/data_statistics/Sgr/History.htm; Center for Disease Control, *Cigarette Smoking—Attributable Mortality and Years of Potential Life Lost—United States, 1990*, Aug. 27, 1993, <http://www.cdc.gov/MMWR/preview/mmwrhtml/00021441.htm>.

16. See S. Health and Family Security Comm., S.F. 108, 2005 (Minn. 2005) (failed to advance) (advocating for patients in mental health and chemical dependence facilities to smoke); *Senate Highlights*, SENATE BRIEFLY (Minn. S. Publications, St. Paul, MN), Feb. 25, 2005, at 9.

17. Quinn et al., *supra* note 14, at 519. "An unexpected observation was the difficulty the hospital employees had with the ban on nicotine. This resistance culminated in a group of workers marching outside one of the hospitals in protest of the ban. This was a short-lived protest, but staff acceptance of the ban lagged behind patient acceptance." *Id.* "[C]ontraband was typically brought in by staff . . ." *Id.* at 516.

psychiatric hospitals. Section III will present data on the prevalence of smoking by individuals with serious mental illness and chemical dependence and their vulnerability to dependence on nicotine and the behavior of smoking.¹⁸ The mental illnesses discussed will include schizophrenia, mood disorders (including major depressive disorder), anxiety disorders (including panic disorder), and alcohol and drug dependence.¹⁹ Section III will also address the effect of chronic tobacco smoking on patients' health, including significantly shorter life expectancies, and the likelihood that smoking contributes to the intensity of mental illness symptoms such as anxiety and depression. As background to the legal issues of Section V, smoking's effects on medication dosages, medication side effects, and the movement disorder tardive dyskinesia are discussed. Section IV will discuss the effects of smoking abstinence on mental illness symptoms, as well as the observations of, and challenges faced by, public psychiatric facilities that have successfully removed tobacco from their premises. Section V will discuss Minnesota Statute section 246.0141, which, in January 2004, mandated that all tobacco products be removed from the grounds of state operated facilities for the treatment of mental illness. The legal basis for this legislation will be presented through the cases *Jarvis v. Levin* and *Price v. Sheppard*, along with a civil case challenging this legislation. Section VI concludes by arguing that legislative action is critical to protect the health and safety of our most vulnerable citizens. Historically, changes to smoking policies for public settings, and even for within medical facilities, have required regulatory or statutory action. The public psychiatric treatment center is the final frontier for statutory action.

II. HISTORY OF TOBACCO USE WITHIN STATE PSYCHIATRIC TREATMENT FACILITIES

Concerns over tobacco use within psychiatric hospitals have existed since the advent of American psychiatry. The unpublished manuscripts of Samuel B. Woodward (1787–1850), a prominent psychiatric physician, contain observations of the effects of tobacco use on patients in psychiatric institutions during psychiatry's early history, prior to the development of contemporary psychiatric medications.²⁰ Dr. Woodward was the first president of the American Psychiatric Association ("APA") and the first superintendent of the Worcester State Hospital in Massachusetts, from 1832 until 1846. Dr. Woodward's 1834 paper, *The Use of Tobacco as a Luxury*, describes his observations of the effects of tobacco on patients' health: "My own experience in the practice of my profession has brought under my observation many cases in which serious indisposition has been kept up for a long time by tobacco in its various forms, all of which symptoms have generally subsided by discontinuing the drug."²¹

18. Tamerin, *supra* note 12.

19. Each mental disorder will be discussed *infra* Part III.B.

20. Jeffrey L. Geller & Neil Kaye, *Smoking in Psychiatric Hospitals: A Historical View of a Hot Topic*, 41 HOSP. & COMMUNITY PSYCHIATRY 12, 1349–50 (1990).

21. *Id.* at 1349.

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

Later, in a separate paper, *Two Communications on the Use of Tobacco*, Dr. Woodward describes the addictive nature of tobacco: “It also produces a fascination or excitement analogous to that produced by opium and alcohol, which makes the consumer a slave to the habit, keeping him under factitious excitement when used, and when withdrawn subjects him to suffering and distress, little less horrible than delirium tremens.”²²

Dr. Woodward’s concerns about tobacco led him to attempt a ban on its use at Worcester State Hospital in 1833. This was likely the earliest documented attempt to ban tobacco use in a state psychiatric facility, and like similar contemporary efforts, it met stiff resistance from the staff. In *The Use of Tobacco as a Luxury*, Dr. Woodward wrote:

Well knowing that tobacco was liable to be very improperly used by the insane, an early effort was made to exclude it from the hospital. In order to effect this, the attendants on the patients were requested to relinquish the habit, and a regulation was adopted, requiring that the use of it be prohibited wholly in the Institution . . . and the regulation is not adhered to with as much strictness as would be desirable.²³

As has been observed in modern state psychiatric facilities, the successful tobacco-free facility requires that everyone forego its use while on facility property.²⁴ Because some staff resisted Dr. Woodward’s efforts, tobacco was once again permitted inside the institution and has remained there since. Although efforts to make the Worcester State Hospital a smoke-free facility resumed in 1990, patient smoking privileges are currently available inside a secure area of the hospital and on its grounds.²⁵

Until the more stringent JCAHO policy of 1992, many psychiatric hospitals and psychiatric units within general hospitals utilized exemptions to allow smoking indoors. Even the Minnesota Clean Indoor Air Act of 1975,²⁶ which eventually mandated that hospital and clinic buildings be smoke-free by 1987, made exemptions for smoking indoors within psychiatric facilities “pursuant to a policy that identified circumstances in which the prohibition of smoking would interfere with the treatment of persons recovering from chemical dependence or mental illness.”²⁷ Thus, as

22. *Id.*

23. *Id.* at 1350.

24. If patients are to be restricted from smoking then staff and visitors must also be restricted. *See* discussion *infra* Part IV.C–D. Briefly, this avoids problems of unfairness and focusing policy toward patients only within a facility rather than the creation of a tobacco-free milieu. This also avoids patients experiencing cues to smoke by observing others smoking which can incite agitation and resentment.

25. E-mail from Cynthia Carrero, Director of Nursing, Worcester State Hospital, to Maureen Hackett, M.D., Adjunct Associate Professor, University of Minnesota (Dec. 10, 2007) (on file with author).

26. Minn. Clean Indoor Air Act, MINN. STAT. § 144.411–417 (2005).

27. *See* Minn. Clean Indoor Air Act, MINN. STAT. § 144.414(3)(b) (2005). The statute allowed for the following exemption:

[S]moking by patients in a locked psychiatric unit may be allowed in a separated well-ventilated area in the unit under a policy established by the administrator of the program that allows the treating physician to approve smoking if, in the opinion of the treating

the medical field removed tobacco from clinical treatment settings, psychiatry kept tobacco accessible, supported by policy and statutory exemptions.

III. PREVALENCE AND EFFECTS OF SMOKING ON MENTAL ILLNESS SYMPTOMS AND TREATMENT

Studies conducted in the United States and abroad document that individuals suffering with mental illness smoke tobacco and depend on nicotine at twice the rate of the general population. Reasons for such high smoking rates are complex and elusive. The general adult population smoking rate in the United States has diminished from 42% in 1965 to 24.7% in 1997 to 20.8% in early 2006.²⁸ Karen Lasser, M.D., conducted an analysis of the National Co-Morbidity Survey, a United States population based prevalence study from 1990–1992, and concluded that persons with a current mental disorder consumed 44.3% of the tobacco sold in the United States.²⁹ Heavy smoking (more than twenty-five cigarettes per day) was rare among persons with no history of mental illness—only 10% were heavy smokers. In addition, this study showed that persons with mental illness quit tobacco for more than one year in substantial numbers, but at a lower rate than the general population (37% versus 42.5%). This study also found that abstainers from illicit drugs and alcohol were able to quit tobacco use at nearly the same rate as the general population. This phenomenon challenges the notion that one need treat addictions sequentially rather than concurrently, and it is receiving more recognition within the chemical dependence treatment community.³⁰ A 2001 survey examining the co-occurrence of nicotine dependence and psychiatric disorders in 43,093 adults found the highest prevalence of nicotine dependence (as distinct from smoking status) among individuals with a current alcohol or drug use disorder—34.5% and 52.4%, respectively.³¹ This study by Bridget Grant, Ph.D., examined tobacco use in all its forms and specified tobacco dependence as distinct from cigarette smoking, which was used by other studies and may or may not indicate nicotine dependence. Grant's study con-

physician, the benefits to be gained in obtaining patient cooperation with treatment outweigh the negative impacts of smoking.

Minn. Clean Indoor Air Act, MINN. STAT. § 144.414(3)(b) (2005).

28. Centers for Disease Control and Prevention, *Prevalence of Current Smoking Among Adults Aged 18 Years and Over: United States 1997–June 2006* (2006), available at http://www.cdc.gov/nchs/data/nhis/earlyrelease/200612_08.pdf.
29. See Karen Lasser et al., *Smoking and Mental Illness: A Population-Based Prevalence Study*, 284 JAMA 2606, 2608 (2000).
30. See BUTLER CTR. FOR RESEARCH AND LEARNING, HAZELDEN INST., RESEARCH UPDATE: NICOTINE ADDICTION ASSOCIATED WITH USE OF ALCOHOL AND OTHER DRUGS (1999) (“While the methodologies vary considerably, the research conducted to date generally supports the notion that smoking cessation does not threaten sobriety or recovery from other addictions, and in fact, may even enhance it.” (citation omitted)).
31. Bridget F. Grant et al., *Nicotine Dependence and Psychiatric Disorders in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions*, 61 ARCHIVES OF GEN. PSYCHIATRY 1107, 1111 (2004).

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

firmed the earlier work by Lasser, concluding that nicotine dependent individuals with a co-morbid psychiatric disorder comprise 7.1% of the population, yet consume 34.2% of cigarettes in the United States.³²

A. Increased Mortality of Mental Illness and Chemical Dependence Due to Smoking

New data indicates that patients with serious mental illness experience higher rates of premature death than was previously suspected. Three studies published in 2006 observed that patients treated for serious mental illness in public psychiatric facilities experienced earlier death than the general population of the same demographic region.³³ Causes of death included unnatural or external causes, such as suicide and accidents, and natural causes, such as heart, cerebrovascular and respiratory diseases, and cancer.³⁴ One study, which was conducted in the Tuscany region of Italy, found a three-fold higher overall mortality for psychiatric patients compared with that of the general population.³⁵ A study conducted on patients in Ohio calculated a standardized mortality ratio of 3.2 to 1.0 (ratio of deceased psychiatric patients to deceased members of the general population) and concluded that heart disease (21%) and suicide (18%) were the leading causes of death.³⁶ This Ohio study calculated a mean of thirty-two years of potential life lost, with the leading cause being suicide, culminating in 41.7 years of potential life lost.³⁷ All three studies concluded that mental health care must integrate primary medical care, including specific risk reductions through lifestyle modifications, such as obesity reduction and smoking cessation.³⁸ Other contributors to this shorter life expectancy in patients treated within the public sector include treatment with the newer or second generation antipsychotic medications, substance abuse, and the symptoms of mental illness.³⁹

A British study, which followed a community sample for thirteen years and examined the circumstances of death in patients with schizophrenia, concluded that

32. *See id.*

33. *See* Debora Meloni et al., *Mortality Among Discharged Psychiatric Patients in Florence, Italy*, 57 *PSYCHIATRIC SERVICES* 10, 1474–81 (2006) (reporting the mortality and cause of death determined for all patients admitted during 1987 to psychiatric units in Florence, Italy); Brian J. Miller et al., *Mortality and Medical Comorbidity Among Patients with Serious Mental Illness*, 57 *PSYCHIATRIC SERVICES* 10, 1482–87 (2006) (studying patients admitted to an Ohio public mental health hospital between 1998–2000); Craig W. Colton & Ronald W. Manderscheid, *Congruencies in Increased Mortality Rates, Years of Potential Life Lost, and Causes of Death Among Public Mental Health Clients in Eight States*, *Preventing Chronic Disease*, 3 *PREVENTING CHRONIC DISEASE* 2 (2006) (comparing the mortality of public mental health clients in eight states with the mortality rates of the general populations of those eight states).

34. *See* Meloni et al., *supra* note 33; Miller et al., *supra* note 33; Colton & Manderscheid, *supra* note 33.

35. *See* Meloni et al., *supra* note 33.

36. *See* Miller et al., *supra* note 33.

37. *See id.*

38. *See* Meloni et al., *supra* note 33; Miller et al., *supra* note 33; Colton & Manderscheid, *supra* note 33.

39. *See* Donald C. Goff et al., *Medical Morbidity and Mortality in Schizophrenia: Guidelines for Psychiatrists*, 66 *J. CLIN. PSYCHIATRY* 183, 190–91 (2005).

most of the excess natural mortality of this community sample was due to cigarette smoking.⁴⁰ Excess natural mortality means death due to a medical cause, as distinct from an external or unnatural cause, such as an accident or suicide. This study extrapolated the illness, and the risk of those illnesses caused by smoking, and determined that smoking was the main contributor to the excess premature deaths. Unfortunately, patients with mental illness are also exposed to medications that can cause health problems. Patients treated with second generation antipsychotic medications are at increased risk of experiencing metabolic changes leading to type 2 diabetes mellitus.⁴¹ The most frequent cause of death in patients with diabetes is cardiovascular disease.⁴² A recent systematic review of studies assessing the association between active smoking and the incidence of type 2 diabetes concluded that active smoking is associated with type 2 diabetes and that active smoking may be a separate independent risk factor for developing type 2 diabetes.⁴³ While most patients' emotional stability depends upon their use of antipsychotic medications, thus exposing them to the risk of developing diabetes and the subsequent effects of diabetes, the additional risk of developing diabetes from smoking is preventable. Type 2 diabetes is an illness that occurs along a spectrum of severity and its negative effects on body systems, such as the cardiovascular and cerebrovascular systems, are worsened by tobacco use. Though mentally ill patients may depend on medications that cause them to develop type 2 diabetes, avoiding tobacco use and implementing a healthy lifestyle can mitigate the long-term medical complications of the diabetes.

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40. Steve Brown, Hazel Inskip & Brian Barraclough, *Causes of the Excess Mortality of Schizophrenia*, 177 BRIT. J. OF PSYCHIATRY 212, 212 (2000). Schizophrenia is a disorder that lasts for at least six months and includes at least one month of two or more active-phase symptoms categorized into two broad categories: 1) Positive symptoms which reflect an excess or distortion of normal function, delusions, hallucinations, and disorganized speech or grossly disorganized behavior; 2) Negative symptoms which reflect diminution or loss of normal function; restricted emotional expression, fluency, and productivity of thought and speech, and the initiation of goal-directed behavior. These signs and symptoms are associated with marked social or occupational dysfunction. DSM-IV-TR, *supra* note 11, at 298–99.
 41. THOMSON HEALTHCARE INC., PHYSICIANS' DESK REFERENCE 1868 (62d ed. 2008) [hereinafter PHYSICIANS' DESK REFERENCE]. For Zyprexa, "epidemiological studies suggest an increased risk of treatment emergent hyperglycemia-related adverse events in patients treated with the atypical antipsychotics." *Id.*
 42. See Lowell Schmeltz & J. Larry Jameson, *Hot Topic: Intensive Insulin Therapy Prevents CVD in Type 1 DM*, HARRISON'S PRINCIPLES OF INTERNAL MEDICINE 17 (Dec. 28, 2005), available at <http://www.accessmedicine.com/updatesContent.aspx?aID=1000682&searchStr=Lowell+Schmeltz+> (online update to Chapter 323 Diabetes Mellitus of the 17th edition of HARRISON'S PRINCIPLES OF INTERNAL MEDICINE). "Individuals with diabetes have a [two]-fold increase in all-cause mortality compared to non-diabetics . . . and a shortened life expectancy by approximately [ten] years. Cardiovascular disease (CVD) is the reported cause of death in 65% of individuals with diabetes in the United States." *Id.*; see also Joel C. Kleinman et al., *Mortality Among Diabetics in a National Sample*, 128 AM. J. EPIDEMIOLOGY 389 (1988).
 43. Carole Willi et al., *Active Smoking and the Risk of Type 2 Diabetes: A Systematic Review and Meta-analysis*, 298 JAMA 2654, 2654 (2007).

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

Alcohol and drug dependence often occur simultaneously with mental illness, especially with mood and anxiety disorders.⁴⁴ Early mortality also occurs in association with alcohol and drug dependence. Richard Hurt, M.D., of the Mayo Clinic, studied specific causes of early death in patients suffering with alcohol and other drug dependencies, examining all patients enrolled in a chemical dependence treatment program spanning ten years and then following their mortality at twenty years.⁴⁵ The observed mortality at twenty years significantly exceeded the expected mortality: 48.1% in the chemically dependent patients versus 18.5% in the general population, matched for the same community demographics. The majority of deaths were tobacco related at 50.9%, while 34.1% were alcohol related. Dr. Hurt concluded that nicotine dependence treatment is imperative in this high risk group.

B. Smoking and Nicotine Dependence and Associated Mental Illness Symptoms

1. Schizophrenia and Tobacco Use

Historically, patients with symptoms of psychosis, particularly those diagnosed with schizophrenia, smoke at the highest rates when compared to the general population, and even when compared with people experiencing other forms of mental illness.⁴⁶ This is true even after controlling for confounding factors such as institutionalization and alcohol or drug use.⁴⁷ A hypothesis that has permeated the mental health community, one that is sometimes used to justify keeping tobacco available within psychiatric facilities, is that nicotine's effect on the central nervous system alleviates the symptoms associated with schizophrenia.⁴⁸ Other explanations for this

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44. Bridget F. Grant et al., *Prevalence and Co-occurrence of Substance Use Disorders and Independent Mood and Anxiety Disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions*, 61 ARCHIVES GEN. PSYCHIATRY 807, 807 (2004).
 45. See Richard D. Hurt et al., *Mortality Following Inpatient Addictions Treatment: Role of Tobacco Use in a Community-Based Cohort*, 275 JAMA 1097 (1996).
 46. See TECHNICAL REPORT ON SMOKING, *supra* note 7, at 3. The estimated smoking prevalence for people with mental illness: major depression (50–60%); anxiety disorder (45–60%); schizophrenia (65–85%). *Id.*
 47. See Jose de Leon & Francisco J. Diaz, *A Meta-analysis of Worldwide Studies Demonstrates an Association Between Schizophrenia and Tobacco Smoking Behaviors*, 76 SCHIZOPHRENIA RES. 135 (2005) (finding that schizophrenia patients had a higher prevalence of ever smoking than the general population); John R. Hughes et al., *Prevalence of Smoking Among Psychiatric Outpatients*, 143 AM. J. PSYCHIATRY 993 (1986) (finding that the prevalence of smoking among psychiatric outpatients was significantly higher than among either local or national population-based samples, even when controlling for age, sex, marital status, socioeconomic status, alcohol use, and institutionalization); S. Levander et al., *Nicotine Use and Its Correlates in Patients with Psychosis*, 116 ACTA PSYCHIATRICA SCANDINAVICA 27 (2007) (finding that nicotine use in psychotic patients was twice as common as in the general population and only a few nicotine users had started after the onset of psychoses).
 48. Alexander H. Glassman, *Cigarette Smoking: Implications for Psychiatric Illness*, 150 AM. J. PSYCHIATRY 546, 550 (1993) (“Although some authors have suggested that this high rate of cigarette smoking is an effort to reduce drug-induced side effects, it seems reasonable to consider the possibility that this very intense use of nicotine by chronic schizophrenic patients serves some more directly therapeutic purpose.”).

high rate of smoking focus on the side effects of antipsychotic medications, including body movement dysfunctions previously thought to be countered by nicotine's effects.⁴⁹ Another reason cited to keep tobacco available is its alleged remediation of cognitive impairments that are inherent to schizophrenia. It is thought that nicotine may improve cognition; therefore patients with schizophrenia are nicotine users to self-medicate their slowed cognitive functioning.⁵⁰ Until recently, a common fear among mental health professionals was that patients with schizophrenia might experience worsened symptoms of psychosis upon abstaining from tobacco use.

Recent studies conducted in Scotland, Spain, and Sweden examined the relationship between tobacco use (smoking or chewing snuff) and schizophrenia.⁵¹ The Scottish and Swedish studies found that most patients with schizophrenia started smoking in their teens (median age seventeen).⁵² Furthermore, the Scottish study found that smoking preceded the onset of schizophrenia in approximately 90% of the patients.⁵³ The Scottish and Spanish studies documented poor long-term outcomes in those patients with schizophrenia who were the heaviest tobacco users.⁵⁴ The Scottish study evaluated the smoking habits and tobacco cessation rates in all patients diagnosed with schizophrenia who lived within one geographic region, had similar socioeconomic backgrounds, and were treated within the same healthcare system in southwest Scotland.⁵⁵ Smoking rates within this group were higher than that of the local general population, at 58% versus 28%.⁵⁶ Interestingly, this rate is lower than rates observed by many older studies of schizophrenia, which ranged from 70–90%.⁵⁷ One explanation for this is the distribution of patients studied: the contemporary study observed both outpatient and hospital settings while the earlier studies likely only observed institutionalized patients.⁵⁸ Another possible explanation for the lower rates of smoking among patients observed in the contemporary

49. See A.G. Awad & L.N.P. Voruganti, *Neuroleptic Dysphoria: Revisiting the Concept 50 Years Later*, 111 ACTA PSYCHIATRICA SCANDINAVICA 6, 11 (2005); S. Silversti et al., *Does Nicotine Affect D2 Receptor Upregulation? A Case Control Study*, 109 ACTA PSYCHIATRICA SCANDINAVICA 313, 313(2004).

50. Kristi A. Sacco et al., *Effects of Cigarette Smoking on Spatial Working Memory and Attentional Deficits in Schizophrenia: Involvement of Nicotine Receptor Mechanisms*, 62 ARCHIVES OF GENERAL PSYCHIATRY 649, 649 (2005). Untoward cardiovascular effects limit nicotine's clinical use as a cognitive enhancer. Research on other substances that act as nicotine agonists and potential cognitive enhancers is beyond the scope of this paper.

51. Ciara Kelly & Robin G. McCreadie, *Smoking Habits, Current Symptoms, and Premorbid Characteristics of Schizophrenic Patients in Nithsdale, Scotland*, 156 AM. J. PSYCHIATRY 1751, 1752 (1999); M. Carmen Aguilar et al., *Nicotine Dependence and Symptoms in Schizophrenia: Naturalistic Study of Complex Interactions*, 186 BRIT. J. PSYCHIATRY 215, 215 (2005); Levander et al., *supra* note 47, at 27–28.

52. Kelly & McCreadie, *supra* note 51, at 1752; Levander et al., *supra* note 47, at 30–31.

53. Kelly & McCreadie, *supra* note 51, at 1755.

54. *Id.* at 1756; Aguilar et al., *supra* note 51, at 220.

55. Kelly & McCreadie, *supra* note 51, at 1752.

56. *Id.* at 1755.

57. See DSM-IV-TR, *supra* note 11, at 266; Hughes et al., *supra* note 47, at 993.

58. Kelly & McCreadie, *supra* note 51, at 1752.

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

studies is that patients with mental illness are simply mirroring the trend in the general population and quitting smoking in greater numbers.

In general, patients hospitalized for schizophrenia smoke at higher rates than other patients with schizophrenia.⁵⁹ This is consistent with the findings of the Scottish study, which found that patients with schizophrenia who smoked required more psychiatric services, more hospital admissions and more frequently received medication treatment via intramuscular injections of antipsychotic medications than non-smoking patients.⁶⁰ The Spanish study also found that the patients most heavily dependent on nicotine had the highest proportion of hospital admissions.⁶¹ Both the Spanish study and the Scottish study concluded that smoking signified a worsened course of illness and that the patients with schizophrenia who smoked or used snuff did so more heavily (the equivalent of more than twenty-five cigarettes per day) than the general population of smokers.⁶² The Scottish study also demonstrated that patients with schizophrenia can stop smoking successfully.⁶³ The study found that females with schizophrenia quit smoking at the same rate as that seen in the local general population.⁶⁴ In addition, smoking cessation programs for patients with schizophrenia and the clinical experience of tobacco-free psychiatric hospitals have shown that abstinence from tobacco does not worsen or cause relapses in symptoms of psychosis.⁶⁵

A Swedish study by Levander examined the self-medication hypothesis with regard to cognition and the side effects of medication.⁶⁶ The study prospectively examined patients diagnosed with schizophrenia or schizophrenia-related psychosis yearly over five years to assess their level of nicotine intake in the form of cigarettes or snuff. The study also assessed the severity of illness, treatment rendered, medication side effects, and cognitive impairments. This five year study found no support for a self-medication hypothesis as there were no significant differences found between those with schizophrenia that used tobacco and those that did not use tobacco. Patients who smoked did not exhibit improved cognitive functioning or less medication side-effects than nonsmokers. Levander concluded that patients with psychosis “fail to desist” from using tobacco rather than use tobacco for a beneficial neurochemical effect. Levander based this opinion on his observation that all but a few

59. J. De Leon et al., *Schizophrenia and Smoking: An Epidemiological Survey in a State Hospital*, 152 AM. J. PSYCHIATRY 453, 453 (1995).

60. Kelly & McCreadie, *supra* note 51, at 1751.

61. Aguilar et al., *supra* note 51, at 218.

62. *Id.* at 217; Kelly & McCreadie, *supra* note 51, at 1755.

63. Kelly & McCreadie, *supra* note 51, at 1756.

64. *Id.* at 1752.

65. See Douglas M. Ziedonis & Tony P. George, *Schizophrenia and Nicotine Use: Report of a Pilot Smoking Cessation Program and Review of Neurobiological and Clinical Issues*, 23 SCHIZOPHRENIA BULL. 247, 251 (1997); Monihan et al., *supra* note 5, at 7; Quinn et al., *supra* note 14, at 452 (finding a decrease in acts of aggression following enactment of the no smoking policy).

66. Levander et al., *supra* note 47, at 28.

patients began using tobacco an average of eight years before the onset of their schizophrenic illness, and the patients did not experience significant positive benefits from using tobacco.⁶⁷ Levander opined that the task of the healthcare system is a practical one: to find better methods to help patients with schizophrenia stop using tobacco rather than to identify complex mechanisms underlying their use of tobacco.

2. *Smoking's Effect on Anxiety and Depressive Symptoms*

Studies investigating the relationship between smoking and mood disorders have focused on anxiety disorders and major depression, as well as sub-clinical depressive symptoms.⁶⁸ One study noted that “[b]oth anxiety and depression are thought to play a role in the initiation, maintenance and cessation of smoking behaviors.”⁶⁹ Regarding anxiety, studies have found an association between smoking and the presence of anxiety disorders.⁷⁰ A 1986 study by Dorothy Hatsukami, M.D., of the University of Minnesota, found 47% of psychiatric outpatients diagnosed as having

67. *Id.* at 30–31. The Levander study found the following:

The most parsimonious interpretation of our findings is that patients with schizophrenia and other psychotic disorders are nicotine dependent because they have started to smoke already in their teens, well before onset of psychosis. It is a reasonable assumption that the psychotic illness interferes with their ability to stop smoking (failure to desist rather than pressure to persist)

Id.

68. See DSM-IV-TR, *supra* note 11, at 349–56. Depressive symptoms are classified according to symptom intensity, length, or associated symptoms. *Id.* at 349.

The essential features of Major Depressive Episode is a period of at least 2 weeks during which there is either depressed mood or the loss of interest or pleasure in nearly all activities. In children or adolescents the mood may be irritable rather than sad. The individual must also experience at least four additional symptoms drawn from a list that includes changes in appetite or weight, sleep, and psychomotor activity; decreased energy; feelings of worthlessness or guilt; difficulty thinking, concentrating or making decisions; or recurrent thoughts of death or suicidal ideation plans or attempts . . . a symptom must either be newly present or must have clearly worsened compared with the person's pre-episode status.

Id. at 429. Diagnoses of anxiety disorders include: panic attack, agoraphobia, panic disorder with and without agoraphobia, post-traumatic stress disorder, generalized anxiety disorder, specific phobia, social phobia, acute stress disorder, obsessive-compulsive disorder, anxiety disorder due to general medical condition, substance-induced anxiety disorder, and anxiety disorder not otherwise specified.

69. Holly E. R. Morrell & Lee M. Cohen, *Cigarette Smoking, Anxiety and Depression*, 28 J. PSYCHOPATHOLOGY & BEHAV. ASSESSMENT 4, 283 (2006).

70. See DSM-IV-TR, *supra* note 11, at 429. Anxious mood or anxiety is not a formal diagnosis but a symptom description that may qualify as a formal anxiety disorder as listed in DSM-IV. *Id.*; see also Denise B. Kandel et al., *Psychiatric Disorders Associated with Substance Use Among Children and Adolescents: Findings from the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study*, J. ABNORMAL CHILD PSYCHOL. 121, 132 (1997); J. Himle, B.A. Thyer & D.J. Fischer, *Prevalence of Smoking Among Anxious Outpatients*, 1 PHOBIA PRACT. RES. J. 25, 25–31 (1998).

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

an anxiety disorder used tobacco.⁷¹ Two hypotheses have been proposed to account for the association between anxiety and smoking. One hypothesis is that having anxiety increases the risk of smoking due to a variety of factors, including calming effects of smoking, facilitation of social interactions, and peer pressure.⁷² A second hypothesis is that smoking causes anxiety due to its effects on respiratory functioning and the stimulation effects of nicotine.⁷³ Because smoking initiation usually occurs in adolescence and young adulthood, prospective studies of children and adolescents can look specifically at whether smoking contributes to the initiation of anxiety or whether having an anxiety disorder increases the likelihood of becoming a regular smoker. In fact, prospective studies of adolescents have shown that smoking may actually predispose individuals to develop anxiety disorders.⁷⁴ When adolescents were studied for six years from ages sixteen to twenty-two years, Johnson found that heavy smoking was associated with higher rates of agoraphobia, generalized anxiety disorder, and panic disorder in early adulthood.⁷⁵ The inverse association was not found; anxiety disorders during adolescence did not result in higher rates of chronic cigarette smoking during early adulthood. A five-year study of adults by Breslau and Klein found that smoking initiation increased the risk for subsequent panic attacks by at least three-fold. However, having a pre-existing panic disorder was not associated with increased incidence of daily smoking.⁷⁶ The relationship between anxiety and smoking is likely a complex interplay of biological and behavioral factors. The biological factors are complex and likely include the stimulating effects of nicotine,⁷⁷

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71. James R. Hughes et al., *Prevalence of Smoking Among Psychiatric Outpatients*, 143 AM. J. PSYCHIATRY 993, 995 (1986).
 72. H. Sonntag et al., *Are Social Fears and DSM-IV Social Anxiety Disorder Associated with Smoking and Nicotine Dependence in Adolescents and Young Adults?*, 15 EUR. PSYCHIATRY 67, 73 (2000).
 73. Naomi Breslau & Donald F. Klein, *Smoking and Panic Attacks: An Epidemiologic Investigation*, 56 ARCHIVES GEN. PSYCHIATRY 1141, 1146 (1999); Steven C. Dilsaver, *Nicotine and Panic Attacks*, 144 AM. J. PSYCHIATRY 1245, 1245 (1987).
 74. Jeffrey G. Johnson et al., *Association Between Cigarette Smoking and Anxiety Disorders During Adolescence and Early Adulthood*, 284 JAMA 2348, 2350 (2000); Barbara Isensee et al., *Smoking Increases the Risk of Panic: Findings from a Prospective Community Study*, 60 ARCHIVES OF GEN. PSYCHIATRY 692, 698 (2003).
 75. See Johnson et al., *supra* note 74. “The essential feature of Agoraphobia is anxiety about being in places or situations from which escape might be difficult (or embarrassing) or in which help may not be available in the event of having a Panic Attack or panic-like symptoms.” DSM-IV-TR, *supra* note 11, at 432. “The essential features of generalized anxiety disorder is excessive anxiety and worry . . . occurring more days than not for a period of at least six months about a number of events or activities.” *Id.* at 476. Generalized anxiety disorder is also characterized by difficulty controlling the excessive worry, accompanied by at least three symptoms such as difficulty concentrating, restlessness, and being easily fatigued. *Id.* “Panic disorder is characterized by reoccurring, unexpected panic attacks. A panic attack is a discrete episode of intense fear or discomfort” with four or more accompanying symptoms such as pounding heart, sweating, trembling, shortness of breath, or smothering sensations. *Id.* at 432.
 76. Breslau & Klein, *supra* note 73, at 1145; see also Isensee et al., *supra* note 74, at 698 (“Preexisting panic did not show any association with later onset of smoking or nicotine dependence.”).
 77. Daniel S. McGehee et al., *Cellular and Synaptic Effects of Nicotine*, in MEDICATION TREATMENTS FOR NICOTINE DEPENDENCE 25, 27 (Tony P. George ed., 2007).

the effects of carbon monoxide (which displaces oxygen that is bound to the hemoglobin of red blood cells) that can be measured in smokers' breath,⁷⁸ and the pulmonary effects of smoking (which creates higher levels of carbon dioxide in chronic smokers with chronic obstructive pulmonary disease). Carbon dioxide administration is a reliable means to induce panic attacks and is used in mental health research.⁷⁹ Thus, individuals who smoke raise their levels of anxiety due to biochemical effects, and then continue to use the behavior of smoking (focused and controlled breathing) to lower their anxiety. The result is likely an escalating cycle of anxious mood.

As stated earlier, mental health professionals advocate for the availability of tobacco as a means for patients to calm themselves. The actual behavior or activity of smoking and the context in which it is done may provide a brief and limited calming effect. A recent study by Beckham investigated the effects of nicotinized and denicotinized cigarettes on craving, mood, and symptoms of posttraumatic stress disorder ("PTSD").⁸⁰ The study found that smoking either type of cigarette decreased cravings for smoking and decreased negative mood and symptoms of PTSD, but these ameliorative effects of having smoked a cigarette were short-lived. The study concluded that the context and non-pharmacologic effects—i.e., the behavior intrinsic to smoking, such as controlled breathing and focused attention to a limited stimulus—are important variables. These variables briefly reduce craving and relieve negative moods, particularly in smokers with PTSD who are exposed to stressful conditions. In contrast to this brief diminishment of negative mood through smoking even denicotinized cigarettes, long-term smoking abstinence has been shown to decrease anxiety over a four week period.⁸¹ Though the behaviors intrinsic to smoking, such as controlled breathing, appear to provide brief relief from negative moods, these effects are short-lived and likely even detrimental in the long-term when compared to the more lasting benefits of stopping altogether or never initiating smoking at all. Nonetheless, the behaviors associated with smoking need to be creatively addressed to assist patients with smoking cessation. Such behaviors include the

78. See Arthur C. Guyton & John E. Hall, *TEXTBOOK OF MEDICAL PHYSIOLOGY* 509–10 (Elsevier Saunders ed., 11th ed. 2005); Karl Fagerström, *Assessment of the Smoker Who Wants to Quit*, 56 *MONALDI ARCHIVES FOR CHEST DISEASE* 2, at 124–27 (2001) ("The most important factors to assess are probably motivation, dependency and CO [carbon monoxide] in expired air.").

79. Marlies A. van Duinen et al., *CO₂ Challenge Results in Hypothalamic-Pituitary-Adrenal Activation in Healthy Volunteers*, 19 *J. PSYCHOPHARMACOLOGY* 3, at 243–47 (2005) ("The 35% CO₂ challenge is known to induce symptoms of a panic attack both in panic disorder (PD) patients and healthy volunteers.").

80. Jean C. Beckham et al., *The Effects of Cigarette Smoking on Script-Driven Imagery in Smokers With and Without Posttraumatic Stress Disorder*, 32 *ADDICT BEHAV.* 2900, 2900 (2007).

81. Robert West & Peter Hajek, *What Happens to Anxiety Levels on Giving Up Smoking*, 154 *AM. J. PSYCHIATRY* 1589, 1589 (1997).

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

assignment of meaning to smoking by the smoker, social interactions, focused and limited stimulus attention, and controlled breathing exercises.⁸²

Studies of depressive symptoms and major depressive disorders conclude that there is a highly significant relationship between smoking and major depression, and that each has been found to be predictive of the other.⁸³ At least one study has raised the possibility that smoking initiation leads to, or is causally linked to, the development of depressive symptoms. Over five years, Drs. Wu and Anthony studied adolescents who began smoking regularly and found that those who smoked had a modestly increased risk of depressive symptoms. In this same study, those adolescents with antecedent depressed moods did not have a higher associated risk of later cigarette smoking.⁸⁴

Kenneth S. Kendler, M.D., in a study of 1,566 female monozygotic (or identical) twins, proposed a genetic vulnerability to both major depression and to heavy nicotine consumption.⁸⁵ His study was also the first to document a strong association between smoking and future episodes of major depression. Kendler concluded that a genetic factor was common to both major depression and to smoking, and that this genetic factor caused both.

Patients with depression, as with other mental disorders, appear vulnerable to dependence on tobacco. According to Naomi Breslau, those individuals with active major depression are more likely to progress to daily smoking compared to patients with major depression in remission.⁸⁶ Having a history of depression also affects smoking cessation program completion. According to a study by Alexander H. Glassman, M.D., individuals with a history of depression who attempt to stop smoking have higher attrition rates from cessation programs.⁸⁷

Smoking has been linked to suicidal thoughts and behaviors, as well as to suicide itself. The association between suicide and smoking has been found in epidemiologic studies of non-psychiatric subpopulations of physicians and nurses.⁸⁸ While researchers caution against interpreting this data to conclude that smoking is an independent risk factor for suicide, it is noteworthy that smoking was found to be a predictor of suicide in a Finnish study of depressed individuals. Antti Tanskanen,

82. David Olivier, Dan I. Lubman & Richard Fraser, *Tobacco Smoking Within Psychiatric Inpatient Settings: A Biopsychosocial Perspective*, 41 AUSTL. & N.Z. J. PSYCHIATRY 572 (2007).

83. Tamerin, *supra* note 12, at 590.

84. Li-Tzy Wu & James C. Anthony, *Tobacco Smoking and Depressed Mood in Late Childhood and Early Adolescence*, 89 AM. J. PUB. HEALTH 1837, 1983 (1999).

85. Kenneth S. Kendler et al., *Smoking and Major Depression: A Causal Analysis*, 50 ARCHIVES GEN. PSYCHIATRY 36, 36 (1993).

86. Naomi Breslau, Scott P. Novak & Ronald C. Kessler, *Psychiatric Disorders and Stages of Smoking*, 55 BIOLOGIC PSYCHIATRY 69, 69 (2004).

87. Alexander H. Glassman et al., *Smoking, Smoking Cessation, and Major Depression*, 264 JAMA 1546, 1546 (1990).

88. David Hemenway, Sara J. Solnick & Graham A. Colditz, *Smoking and Suicide Among Nurses*, 83 AM. J. PUB. HEALTH 249, 250 (1993).

M.D., Ph.D., surveyed all 1,744 psychiatric patients evaluated in one year at a hospital in eastern Finland and found the probability of at least one previous suicide attempt to be two times higher among current smokers with severe depression than among nonsmokers with severe depression.⁸⁹ Smokers with depression were also found to have a 43% greater risk of suicidal thoughts than nonsmokers even after controlling for age, sex, marital status, education, income level, employment status, psychiatric diagnosis, alcohol drinking pattern, and level of depression.

3. *Antipsychotic Medication and Smoking*

The combustion byproducts of smoke, called polycyclic aromatic hydrocarbons, stimulate or induce a smoker's liver to increase the metabolism and clearance of certain antipsychotic medications.⁹⁰ This increased metabolism then lowers the parent or active medication compound experienced by the smoker, requiring higher doses to achieve the same therapeutic effect. Antipsychotic medications are used to treat an array of mental illness symptoms common to many diagnostic categories. Symptoms include psychosis, mania, and agitation. Many of the side effects of these medications are dose dependent, so taking higher doses exposes patients to untoward effects, such as fatigue, and life-threatening side effects, such as seizures.⁹¹ Increased metabolism means more metabolites, which can increase side effects. Many studies have demonstrated that among patients treated for schizophrenia and mood disorders, smokers require higher doses of certain antipsychotic and antidepressant medication.⁹² The Levander study did not demonstrate higher doses of medications for smokers, but half of the male patients chewed tobacco, which creates no smoke-related hydrocarbons to affect medication metabolism.

4. *Tardive Dyskinesia*

Tardive dyskinesia, an involuntary movement disorder, is a known and irreversible side effect associated with maintenance or long-term treatment with conventional antipsychotic medications, such as haloperidol. Tardive dyskinesia is characterized by involuntary muscle movements, such as chewing or licking movements, and in-

89. Antti Tanskanen et al., *Smoking and Suicidality Among Psychiatric Patients*, 155 AM. J. PSYCHIATRY 129, 129 (1998).

90. Hiral D. Desai, Julia Seabolt & Michael W. Jann, *Smoking in Patients Receiving Psychotropic Medications: A Pharmacokinetic Perspective*, 15 CNS DRUGS 469, 470 (2001).

91. Jose De Leon, Scott C. Armstrong & Kelly L. Cozza, *The Dosing of Atypical Antipsychotics*, 46 PSYCHOSOMATICS 262, 265–66 (2005).

92. See PHYSICIANS' DESK REFERENCE, *supra* note 41, at 1867; Desai et al., *supra* note 90, at 474–75. Zyprexa, a trade name for olanzapine, is a second generation or atypical antipsychotic medication: "Olanzapine clearance is about 40% higher in smokers than in nonsmokers although dosage modifications are not routinely recommended." *Id.* Examples of antidepressants whose metabolism is affected by smoking are: amitriptyline, clomipramine, and imipramine fluvoxamine. Antipsychotics medications include: clozapine, olanzapine, haloperidol, and chlorpromazine. See Aage Tverdal et al., *Mortality in Relation to Smoking History 13 Years' Follow-Up of 68,000 Norwegian Men and Women 35–49 Years*, 46 J. CLINICAL EPIDEMIOLOGY 475 (1993).

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

volves muscles of the extremities or trunk along with muscle movements for swallowing and speech production. The rate at which patients develop tardive dyskinesia increases with the length of treatment with antipsychotic medications.⁹³

Spontaneous dyskinesias, which are clinically indistinguishable from tardive dyskinesia, have occurred in the absence of antipsychotic medications more frequently in men who smoke than in men who do not smoke.⁹⁴ Agneta Nilsson studied a general population of 559 healthy Swedish men of age fifty-five to assess abnormal involuntary movements and risk factors associated with these dyskinesias. The study found that an individual without any known risk factor (a nonsmoker without antipsychotic medication exposure) had a 5.3% probability of abnormal involuntary movements. Smoking twenty or more cigarettes per day increased the probability to 18.7%, exposure to antipsychotic medications increased the probability to 29.7%, and a high risk individual with both antipsychotic exposure and more than twenty cigarettes daily had a probability of dyskinesia as high as 63.6%. Greater frequencies of dyskinesias have been observed in patients who smoked and received antipsychotic medications than in patients who did not smoke but received the same medications.⁹⁵

The permanent and disfiguring nature of tardive dyskinesia, and its potential occurrence as an effect of antipsychotic medication treatment, provided the legal justification in the state of Minnesota for classifying involuntary treatment of patients with antipsychotic medications as a form of “intrusive treatment,” a category that requires a court petition to force the medications on individuals who have been found legally incompetent and unwilling to take them voluntarily.⁹⁶

In *Jarvis v. Levine*, the Supreme Court of Minnesota relied on its decision in *Price v. Sheppard* in finding that forced antipsychotic medications is an intrusive treatment because of the potential for developing permanent abnormal body movements of tardive dyskinesia, as well as the potential for other side effects.⁹⁷ A petition for “intrusive treatment” with antipsychotic medications was deemed necessary when patients who refused such treatment were found to be incompetent and in need of treatment.⁹⁸ In *Price*, the court concluded that the state must use the least restrictive means available when intrusive treatments are proposed in order to mitigate the im-

93. John M. Kane & Anil K. Malhotra, TREATMENTS OF PSYCHIATRIC DISORDERS, PSYCHOPHARMACOLOGY OF SCHIZOPHRENIA AND OTHER PSYCHOTIC DISORDERS, 1038 (Glen O. Gabbard ed., 3d ed. 2001).

94. Agneta Nilsson et al., *Cigarette Smoking Is Associated with Abnormal Involuntary Movements in the General Male Population: A Study of Men Born in 1933*, BIOLOGICAL PSYCHIATRY, 717 (1997).

95. Ramzy Yassa et al., *Nicotine Exposure and Tardive Dyskinesia*, 22 BIOLOGICAL PSYCHIATRY 67, 67 (1987). High dose neuroleptics also called antipsychotics are known to mask the abnormal movements of tardive dyskinesia, which become clinically apparent upon medication withdrawal or reduction. Some studies finding no increased tardive dyskinesia associated with smoking also show that the patients that smoke took higher doses of antipsychotic medication. The high dose of antipsychotic likely masked the clinical signs of these abnormal muscle movements which generally occur in the face and mouth area. *Id.*

96. See *Price v. Sheppard*, 239 N.W.2d 905 (Minn. 1976).

97. See *Jarvis v. Levine*, 418 N.W.2d 139, 143–46 (Minn. 1988) (citing *Price*, 239 N.W.2d 905).

98. *Price*, 239 N.W.2d at 913.

pact on patients' rights.⁹⁹ In other words, the court required that other less restrictive alternatives be attempted to treat the patient's symptoms before resorting to intrusive treatment.

IV. TOBACCO ABSTINENCE, MENTAL ILLNESS, AND PUBLIC PSYCHIATRIC TREATMENT FACILITIES

A. *Tobacco, Nicotine and Addiction, and the Phenomenon of Craving*

Nicotine, the main addictive component of tobacco, is a psychoactive substance with stimulant and positive reinforcement properties. Nicotine's effects on the brain's receptors are not completely understood. Nicotine acts on neurotransmitters within the central nervous system that are also targeted by psychotropic medications, opioid medications, and even cocaine.¹⁰⁰ Nicotine acts on centers within the brain by increasing levels of many neurotransmitters including beta-endorphins, dopamine, and norepinephrine. Nicotine receptors, which are stimulated by nicotine, modulate major neurotransmitters that are also targeted by antidepressants and anti-anxiety medications.¹⁰¹ Although the effects of nicotine-induced alteration of neurotransmitter levels are not completely understood, it is known that individuals build up a tolerance to nicotine and experience significant withdrawal symptoms when its use is abruptly stopped.¹⁰² Individuals with mental illness may be more sensitive to the effects of nicotine, or more sensitive to the dysphoria experienced when nicotine levels drop. Adequate nicotine replacement, as a component of tobacco cessation programs and within tobacco-free facilities, is important to avoid abrupt nicotine withdrawal.

Nicotine reaches the brain within ten seconds of inhalation and stimulates dopamine release within the brain center, called the nucleus accumbens, likely through activation of nicotine acetylcholine receptors.¹⁰³ Dopamine release caused by nicotine use is thought to create the addictive quality of nicotine, similar to dopamine release caused by other psychostimulants, such as cocaine. In fact, the subjective feeling of craving, which is stimulated by cueing an addicted person with reminders of their addicted substance, is thought to involve dopamine release within the brain.¹⁰⁴ According to Steven D. LaRowe, "a common feature of many definitions of craving is that it is a subjective state of desire with motivational properties that have an im-

99. *Id.*

100. See David J. Scott et al., *Smoking Modulation of μ -opioid and Dopamine D2 Receptor-Mediated Neurotransmission in Humans*, 2007 NEUROPSYCHOPHARMACOLOGY 450.

101. See K.O. Hausteiner, S. Haffner & B.G. Woodcock, *A Review of the Pharmacological and Psychopharmacological Aspects of Smoking and Smoking Cessation in Psychiatric Patients*, 40 INT'L J. CLINICAL PHARMACOLOGY & THERAPEUTICS 404 (2002).

102. Beckham et al., *supra* note 80, at 2900.

103. *Id.*

104. See Steven D. LaRowe et al., *Reactivity to Nicotine Cues over Repeated Cue Reactivity Sessions*, 32 ADDICTIVE BEHAVIORS 2888, 2896 (2007), available at <http://www.sciencedirect.com>.

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

portant role in the procurement and consumption of drugs.”¹⁰⁵ Measures of craving and cue reactivity have been used to predict relapse and to assess treatment of addictions. It is craving that fuels or pushes an addicted person to use, and feelings of craving are monitored as signs of active addiction. Smokers commonly report extreme cravings to smoke when they see other individuals smoke or when they experience reminders of smoking, such as watching a smoking scene in a movie. When an addicted person is maximally cued, but their ability to use is denied or only partially relieved, then feelings of tension increase.

Psychiatric facility staff and patients describe feeling intimidated by the intensity of patients’ drive to smoke and are fearful of the consequences of interfering with that desire.¹⁰⁶ This is a logical explanation for why partial smoking bans are considered more difficult to enforce and ultimately do not create the less aggressive environment than that experienced with total smoking bans.¹⁰⁷ To avoid engendering cravings and the resulting frustrations and aggression, treatment facilities need to remove cues to use tobacco by extending the ban to the entire facility grounds, and to all patients, staff, and visitors.

B. Tobacco-Free Settings: Tobacco Abstinence and Mental Illness Symptoms

Despite the difficulty that individuals with mental illness experience with smoking cessation, studies have demonstrated that acute psychiatric symptoms do not worsen following admission to a smoke-free psychiatric facility.¹⁰⁸ Predictions of increased assaultive behaviors and discharges against medical advice were unfounded. A review of findings from twenty-six international studies on the efficacy of smoking bans in inpatient psychiatric settings found that staff generally anticipated more smoking cessation-related problems than actually occurred.¹⁰⁹ Despite a few case reports,¹¹⁰ no increases in aggression, use of seclusion, discharges against medical advice, or increased use of as-needed medications for agitation were documented following smoking bans, especially where bans were for the entire facility premises and

105. *Id.* at 2889 (citations omitted).

106. TECHNICAL REPORTS ON SMOKING, *supra* note 7, at 7.

107. See, e.g., Grant T. Harris et al., *Effects of a Tobacco Ban on Long-Term Psychiatric Patients*, 34 J. BEHAVIORAL HEALTH SERVICES & RES. 43, 44 (2007) (“Where total tobacco proscriptions (banning all tobacco products) have been instituted, common experiences include greater ease of enforcing tobacco prohibition than in partial bans, elimination of environmental tobacco smoke, no rise in aggression and gradual acceptance of the ban.”).

108. See Cedric M. Smith et al., *Obligatory Cessation of Smoking by Psychiatric Inpatients*, 50 PSYCHIATRIC SERVICES 91, 94 (1999); Ellen Haller, et al., *Impact of a Smoking Ban on a Locked Psychiatric Unit*, 57 J. CLINICAL PSYCHIATRY 329, 332 (1996).

109. Sharon Lawn & Rene Pols, *Smoking Bans in Psychiatric Inpatient Setting*, 39 AUSTL. AND N.Z. J. OF PSYCHIATRY 866, 866 (2005); Judith J. Prochaska et al., *How Prepared Are Psychiatry Residents for Treating Nicotine Dependence?*, 29 ACAD. PSYCHIATRY 256, 257 (2005).

110. See Michael Greenman & Thomas McClellan, *Negative Effects of a Smoking Ban on an Inpatient Psychiatry Service*, 42 HOSPITAL AND COMMUNITY PSYCHIATRY 408 (1991).

not partial (e.g., indoor ban only).¹¹¹ Although nearly all published studies have documented the absence of specific mental health problems from abrupt abstinence in smoke-free acute psychiatric facilities, shortcomings have been noted in the consistent application of medical interventions for nicotine dependence. To increase patient compliance with mental health treatment and engage them in the process of attaining long-term smoking cessation, psychiatric treatment must address patients' nicotine dependence during their abrupt abstinence in tobacco-free settings.¹¹²

C. Public Psychiatric Facilities

1. Different Tobacco Policies and Stated Reasons for Such

Public or state hospitals provide long-term treatment to patients with chronic and severe mental illness, usually as a result of the state's civil commitment process. Many of these facilities continue to allow tobacco use within the treatment setting. A 2006 survey of state mental health facilities by the National Association of State Mental Health Program Directors ("NASMHPD") indicated that more than half of the 235 state-run public psychiatric facilities, which treat more than 50,000 patients at any given time, allow patients access to tobacco.¹¹³ Reasons listed for continued access to tobacco included using tobacco to decrease agitation, to de-escalate situations of conflict, and to reward patient compliance with staff. Concerns regarding institution of tobacco-free status included resistance and opposition from staff members who smoke and staff members' fears of patients' reactions, of patient rights advocates' reactions, and of change in general. This same survey found that 41% of the 158 facilities that responded to the survey prohibited tobacco use on their facility grounds. The most commonly cited motivators for transitioning the facilities to tobacco-free included the promotion of healthier lifestyles and a cleaner environment, the provision of more time for active treatment, improved group therapy attendance, fewer incidences of fire danger, and compliance with state law. Respondents that removed tobacco reported a decrease in behavioral problems related to smoking, decreased violence, and increased staff satisfaction subsequent to implementation of tobacco bans. The conclusions of studies and reports of state facilities that have banned tobacco from their grounds strongly suggest that the successful implementation of tobacco bans and the avoidance of problems are dependent on successfully preventing patient access to tobacco.¹¹⁴

2. Aggression and Tobacco Removal

In 1998, North Texas State Hospital in Wichita Falls, Texas was one of the first state hospitals in the United States to convert to tobacco-free status. North Texas

111. Harris et al., *supra* note 107.

112. See generally Prochaska et al., *supra* note 109 (addressing a need to train psychiatry residents in treating tobacco dependence).

113. TECHNICAL REPORTS ON SMOKING, *supra* note 7, at 6–7.

114. See Hempel et al., *supra* note 14; Quinn et al., *supra* note 14.

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

State Hospital measured incidents of physical and verbal aggression and compared the results for the month prior to the conversion to the second month following the conversion.¹¹⁵ This study controlled for raters by using the same behavior analysts before and after the conversion and quantifying aggressive behaviors using the Overt Aggression Scale.¹¹⁶ Aggressive behaviors are categorized as verbal or physical. Verbal aggression ranges from mild to severe and includes angry shouting, yelling personal insults, cursing, and verbal threats. Physical aggression includes aggression against objects, self, or other people. Physical aggression ranges from causing no injury or minor injury to causing severe injury. It includes slamming doors, throwing objects, kicking and breaking objects, causing self-harm, and finally hurting or attempting to hurt others by pushing, grabbing, or hitting. The findings were startling, showing a significant drop in the number of aggressive events by patients when tobacco was removed from the premises. Incidents of verbal aggression decreased by 45% while incidents of physical aggression decreased by 50%, from 266 incidents to 133 incidents. The researchers postulated that aggression was higher when tobacco was available because of the unequal distribution of tobacco. Their review of injury reports pertaining to the period when smoking still occurred showed that numerous injuries were a result of a patient without cigarettes becoming intimidating or assaultive with staff or other patients in an attempt to get cigarettes, or as a result of confrontations triggered by staff imposing smoking restrictions on patients for smoking at inappropriate times or in inappropriate places. This author's inquiries with North Texas State Hospital found that the incidents of aggression continued to decrease every year, resulting in a significant decrease in staff injury rates for four consecutive years. This garnered the hospital the Top Texas State Agency Safety Award for four consecutive years.¹¹⁷

Tobacco's presence in a treatment milieu is weaved into the fabric of interpersonal interactions, even for non-smoking patients. Non-smoking patients witness and experience negative effects of tobacco within the hospital milieu. A 1999 survey of 199 non-smoking patients in nine long-term state hospitals in three states revealed that, on a daily basis, 21% had witnessed staff use cigarettes to coerce and manipulate patients and 26% had witnessed patients threaten or coerce each other regarding cigarette-related issues. Almost half of the patients reported being bothered by other patients' smoking, with one-third of non-smoking patients reporting that they were too intimidated to request the smokers stop.¹¹⁸ Data from the California Department

115. Quinn et al., *supra* note 14.

116. See generally Stuart C. Yudofsky et al., *The Overt Aggression Scale for the Objective Rating of Verbal and Physical Aggression*, 143 AM J. PSYCHIATRY 35-39 (1986).

117. E-mail and telephone communication between Joel Inman, study author, North Texas State Hospital, and Gerald McLain, Chief Information Officer, North Texas State Hospital, to author (January 2003 & January 2008) (e-mail on file with author).

118. TECHNICAL REPORTS ON SMOKING, *supra* note 7, at 7.

of Mental Health's forensic facilities showed that the actual timing of violent episodes correlated with periods before and after smoke breaks.¹¹⁹

D. Creating Tobacco-Free Public Psychiatric Hospitals

1. Arguing Decreased Aggression to Overcome Resistance to Change

The NASMHPD technical report on smoking policy states that the overall goals of recovery from illness and wellness should be emphasized as the best motivator for converting to smoke-free facilities. The report recommends that such conversion should focus on broader change within the treatment milieu rather than the simple ban of tobacco. This change should encompass a healthy lifestyle, with increased attention to smoking cessation efforts, as well as other supportive interventions, such as increased physical and social activities to replace the interactions that patients experience with smoke breaks.¹²⁰

Despite the support of sound medical knowledge and the experience of facilities with successful implementations, significant difficulties persist for facilities attempting to convert to smoke-free status. For example, the California Department of Mental Health encountered so much resistance from staff members and their unions as recently as 2006, that individual facilities have not been able to implement smoking bans. In fact, the forensic facilities continue to allow indoor smoking.¹²¹ The medical director for a California public psychiatric institution stated at the NASMHPD's 2006 meeting that successful conversion of individual facilities was not likely to occur in the absence of a state policy requiring tobacco bans for all facilities. Further, he postulated that a tobacco ban policy would likely gain acceptance if it emphasized the goals of improving patient and staff safety, rather than improving health.¹²² This statement is indicative of the long-held notion that a more compelling argument to advocate banning tobacco use from psychiatric treatment facilities is one that emphasizes benefits beyond mere improved health. Arguing for change based on decreasing aggression and improving the safety of the therapeutic milieu offers a separate and more compelling reason to withhold tobacco within the public psychiatric treatment setting. Improved safety is measurable, can be experienced within a short time frame, and decreases harm to patients and staff in their daily life within the psychiatric treatment facility.

119. *Id.*

120. *Id.* at 23–32.

121. *Id.* at 19. A forensic state psychiatric facility is a facility for the evaluation and treatment of individuals with criminal charges admitted before and/or following the adjudication of their criminal charges. These facilities require a more secure environment and are generally considered to have more dangerous patients.

122. TECHNICAL REPORTS ON SMOKING, *supra* note 7, at 19.

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

2. *Staff's Resistance to Tobacco Removal*

In order to have a truly smoke-free facility and experience the benefits of the improved therapeutic milieu, staff members must cooperate and provide effective enforcement of smoking bans.¹²³ However, mental health staff members who interact daily with patients who are dependent upon tobacco may be compromised in their own ability to support or enforce smoking bans. As noted earlier, the craving experienced by patients may intimidate staff. In addition, staff members may themselves be smokers, and therefore reluctant to embrace decreased access to tobacco while on the job. The rates of smoking among treatment staff in mental health and substance abuse facilities and programs appear higher than the general population, with approximately 30% to 40% of staff identified as smokers, compared with 22% of the general population.¹²⁴ Mental health staff are likely reluctant to lose their ability to barter the use of tobacco in negotiating behavioral issues with patients. Although overt use of tobacco as a behavioral modifier borders on and may even exemplify unethical treatment, one third of facilities that permit smoking and responded to the NASMHPD survey reported using tobacco as a behavioral incentive by linking smoking access to privilege status.¹²⁵ Staff support for smoke-free psychiatric treatment settings in facilities that are smoke-free indicates that many staff members become convinced of the benefits only after the change has successfully occurred. Furthermore, staff who smoke anticipate and perceive more smoking-related problems than staff nonsmokers. This gap in perception does not decrease with the successful implementation of a no smoking policy.¹²⁶ Since staff members' cooperation is crucial to the success of these policies, overcoming their resistance is an essential part of establishing a tobacco-free psychiatric treatment milieu. Involving staff and other interested parties—including patients, patient advocates, patients' families, and even union representatives—in the planning and implementation process is one method to facilitate successful change.¹²⁷

V. LEGISLATING SMOKE-FREE PUBLIC PSYCHIATRIC TREATMENT FACILITIES

A. *An Ethical Debate: Statutory Law Versus Patient Rights*

The medical profession has long subscribed to a body of ethical standards developed primarily for the benefit of the patient. The Principles of Medical Ethics, adopted by the American Medical Association, recognizes the responsibility of physicians to patients first and foremost. For example, Principle I states that “[a] physician shall be dedicated to providing competent medical care, with compassion

123. Harris et al., *supra* note 104, at 44.

124. TECHNICAL REPORTS ON SMOKING, *supra* note 7, at 4.

125. *Id.* at 7.

126. Smith & Grant, *supra* note 8, at 501.

127. See TECHNICAL REPORTS ON SMOKING, *supra* note 7, at 16–17.

and respect for human dignity and rights.”¹²⁸ Principle III states that “[a] physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interest of the patient.”¹²⁹ These principles are not laws, but the standards of conduct that define the essentials of honorable behavior within the medical profession.¹³⁰

While respect for patient rights and respect for patient autonomy are fundamental guiding principles of ethical medical care, the ability to smoke within a treatment setting does not qualify as a fundamental right because granting permission to smoke does not meet the principle threshold of the physician’s duty to provide competent medical care. Physicians do not intervene in all patient behavior that is harmful, but tobacco use within the psychiatric treatment setting not only allows access to behavior that is harmful to the patient, but also negatively affects the overall treatment milieu. Advocacy for patients’ right to make autonomous decisions regarding their personal behavior or even decisions regarding their medical treatment holds sway when the behavior or decision involves choices that are not directly and detrimentally affected by patients’ mental illness or chemical dependence symptoms. For example, patients in public facilities for the treatment of mental illness have voting rights, may enter into civil contracts, such as a divorce or marriage, and may even make medical decisions when their ability to make such decisions is not impaired by the symptoms of their mental illness. Patients’ autonomy and ability to make choices about using tobacco, however, are encumbered by their dependence on tobacco products and may be limited further by their mental illness symptoms, such as depression, anxiety, and psychosis. The availability of tobacco does not provide an opportunity for true choice because, by definition, nicotine-dependent individuals experience a breakdown in their ability to control their use of nicotine, and they experience clinical distress related to this lack of control. Given the overwhelming evidence of tobacco’s negative effects, as well as the increased vulnerability to nicotine dependence experienced by individuals suffering from mental illness, it is the opinion of this author that the medical and ethical duty of physicians to remove tobacco from the treatment setting outweighs any support for a patient’s right to use tobacco while in the treatment milieu.

B. The Need for Legislative Support in Making the Change to Smoke-Free

Significant resistance to tobacco-free psychiatric treatment settings creates daunting barriers for administrators and medical practitioners to effectively establish tobacco-free environments. Despite overwhelming evidence of negative health effects from tobacco and mounting evidence of tobacco’s additional harm within psychiatric treatment settings, robust resistance to change is expressed even by some

128. AM. MED. ASS’N, CODE OF MEDICAL ETHICS: CURRENT OPINIONS WITH ANNOTATIONS, 2008–2009 (2008).

129. *Id.*

130. *Id.*

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

psychiatrists.¹³¹ Unfortunately, the expression of these opinions creates more resistance to change by others who look to physicians for leadership.

Evidence of a historic lack of medical leadership to remove tobacco from inside medical treatment settings can be traced to the mandates that were necessary to make general medical hospitals and clinics smoke-free. The passage of statutory law within Minnesota, via the Clean Indoor Air Act Amendment of 1987, and the nearly simultaneous national accreditation requirements of the JCAHO were necessary.¹³² Those medical professionals who seek to change a medical setting's smoking policy need to garner the assistance and enforcement power of a responsible administrative or legal agency. Government intervention, through establishing new law, is the most effective and efficient way to accomplish a tobacco ban for public psychiatric treatment facilities. For example, while the North Texas State Hospital superintendent and other administrators chose to make their individual facility smoke-free, the Texas legislature's cooperation was needed to defeat the opposition, which had sought legislative intervention to prevent this change.¹³³ While the legislature in Texas simply protected the policy change made by administrators, the legislature in Minnesota actively passed law to remove tobacco from the grounds of all state operated regional treatment centers.¹³⁴ This same Minnesota bill also removed the exemption from the Clean Indoor Air Act for smoking within facilities for the treatment of mental illness and chemical dependence.¹³⁵

C. The State Legislature and the Public Psychiatric Treatment Facility

Public psychiatric treatment facilities are primarily state funded and operated. Their operations are the responsibility of elected state officials who are ultimately responsible to the state's citizens. Thus, the general public has a direct interest in the treatment provided within public facilities. A state legislature supports its state constitution, and members of each state legislature swear or affirm to uphold their state constitution upon taking office.¹³⁶ While each state's constitution differs in its spe-

131. See Quinn et al., *supra* note 14; Minnesota House of Representatives, SESSION WEEKLY, Mar. 12, 2004, at 14, available at <http://www.house.leg.state.mn.us/hinfo/swkly/2003-04/sw604.pdf#page=14> (reporting on testimony given to the Minnesota House Health and Human Services Policy Committee on March 8, 2004 for HF 2312, a bill intended to rescind 2003 legislation that removed tobacco from state operated treatment facilities).

132. Minn. Clean Indoor Air Act, MINN. STAT. § 144.414(3)(a) (1990) ("Smoking is prohibited in any area of a hospital, health care clinic, doctor's office, or other health care-related facility other than a nursing home, boarding care facility, or licensed residential facility . . ."). The statute then allowed for exceptions within chemical dependence treatment programs or mental health programs. Minn. Clean Indoor Air Act, MINN. STAT. § 144.414(3)(b) (1990).

133. TECHNICAL REPORTS ON SMOKING, *supra* note 7, at 15.

134. S. 1329, 2003–2004 Leg., 83rd Sess. (Minn. 2003); H.R. 1329, 2003–2004 Leg., 83rd Sess. (Minn. 2003).

135. *Id.*

136. See, e.g., MINN. CONST. art. IV, §8.

cific wording, the general purpose or object of state government is expressed within its constitution.

For example, Article 1, Section 1 of the Minnesota State Constitution describes the object of government as the following: "Government is instituted for the security, benefit and protection of the people in whom all political power is inherent, together with the right to alter, modify, or reform government whenever required by the public good."¹³⁷ Thus, the legislative process, which may set standards of practice within non-publicly funded and operated facilities, has an even greater interest in the operations of public psychiatric treatment facilities.

Physicians who wish to make changes to the public psychiatric treatment setting may facilitate change from within the state operated institution system, or propose legislation that would have the state government mandate the desired change. Working from within a system is usually preferable as it avoids the need for new laws to regulate medical treatment. Also, obtaining support for change from personnel within the system may be easier without the intrusion of a legal mandate. However, the high resistance to change regarding tobacco access within public psychiatric settings frequently necessitates garnering legislative support, either in the form of new law, or in the form of support by refusal to intervene and stop such a change. That is, even when a new policy is supported by top-level administrators within the state-operated system, the legislature can be solicited to stop subsequent changes to that policy by policy opponents.

D. Legal Arguments for Enacting Statutory Laws to Ban Tobacco in Psychiatric Treatment Settings

As discussed in Section III of this article, tobacco use contributes to the intensification of certain symptoms of mental illness, and it contributes to the development of negative side effects associated with the treatment of these illnesses. It therefore follows that removing tobacco from psychiatric treatment settings is arguably one of the *least intrusive treatment alternatives* available. Minnesota case law establishes a definition of intrusive treatment, as well as for the principle of least restrictive alternative. In *Price v. Sheppard*, the conduct at issue was the administration of electroconvulsive therapy, without proper consent, on a minor who was under involuntary commitment at a state mental hospital.¹³⁸ The Supreme Court of Minnesota held that future cases must obtain court consent to apply intrusive forms of treatment.¹³⁹ The court stated:

The techniques generally available to treat psychological disorders range in degree of severity from the least intrusive forms such as milieu therapy (behavior changes produced by manipulation of the patient's environment) and

137. MINN. CONST. art. I, § 1.

138. 239 N.W.2d 905.

139. *Id.* at 911.

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

psychoanalysis to drug, aversion, or electroconvulsive therapy, and ultimately to psychosurgery.¹⁴⁰

Mentally ill patients who smoke may require higher doses of antipsychotic medications. Thus, these patients are at greater risk of failed medication treatment and of experiencing negative side effects, including the permanent side effect of tardive dyskinesia. As demonstrated in the Scottish and Spanish studies, examined in Section III, Part B, those patients with schizophrenia who smoke experience worse symptoms, as evidenced by their increased hospitalizations and use of intramuscular antipsychotic medications. Increased patient aggression has been shown to occur within treatment settings with tobacco available. Thus, a higher potential for more intrusive treatments, such as seclusion and restraints, forced antipsychotic medication and even electroconvulsive therapy, exists when patients have access to tobacco within the psychiatric treatment milieu. So, removing access to tobacco presents a less restrictive treatment alternative.

Ultimately, if the treatment environment is improved by removing access to tobacco, one can argue that the tobacco-free public psychiatric facility is a less intrusive treatment setting, as well as a healthier one for patients, staff, and visitors. This argument is supported by data showing lower patient aggression in tobacco-free treatment settings. Lower patient aggression translates into less supplemental (frequently forced) medication doses for aggressive events. Additionally, without the metabolic effects of smoking on medications, lower requisite medication doses are possible during the hospital period, when patients' symptoms are at their worst, thus exposing patients to concomitantly lower risks of adverse side effects. Given all of this data, one can contend that public psychiatric facilities that maintain tobacco access are exposing the state system to medical legal liability.

Many patients are committed to these state facilities, without choice as to their placement, due to their civil commitment status. If the presence of tobacco can be shown to expose even non-smoking patients to increased danger, then the potential exists for the state operated system to be liable for this increased risk should an adverse event occur as a direct result of having tobacco available. Additionally, those patients who are heavily dependent on tobacco may be incompetent to make decisions regarding their psychiatric care and unable to weigh the detrimental effects of their smoking upon their mental illness treatment. For example, patients treated with high doses of antipsychotic medication who also suffer life-threatening side effects may not be able to appreciate the detrimental impact smoking has on the dose, on the side effects of the medications, and on their symptoms of mental illness. Having tobacco available for patients who are particularly vulnerable to using heavy amounts and experiencing detrimental effects to their health is another potential medical legal liability for a public psychiatric facility.

140. *Id.*

E. Minnesota Legislative Initiatives

An examination of specific legislation passed in Minnesota illustrates the difficulty in establishing tobacco-free policy and, by extension, the necessity for legislation to enact such a measure. In 1998, while this author served as the clinical director at the Minnesota Security Hospital, a high-security forensic institution, the hospital allowed smoking and tobacco chewing within the confines of courtyards open to the outdoors and highly visible from within the treatment units (for security purposes). Approximately twenty-five patients sent a petition requesting that tobacco be removed from the entire hospital grounds so that they could successfully stop smoking by removing the cues and temptation for their smoking that were present when others smoked. The petition was sent to the hospital administrator, who replied: "Do not send this, when the state is involved in a lawsuit with tobacco companies."¹⁴¹ Further action toward making Minnesota Security Hospital tobacco-free was immediately stopped.

In 2002, this author took up the effort again, while in private practice, by writing letters to the Commissioner of Human Services. By April 2003, the Minnesota Senate Health and Family Security Committee heard testimony on S.F. 1329, a bill to remove tobacco from the grounds of all state-operated facilities for the treatment of individuals with mental illness, chemical dependence, and developmental disabilities, with extension also to facilities for treatment of sex offenders.¹⁴² The tobacco ban applied to the grounds and to all patients, staff, and visitors while on the state-operated grounds. This author initiated the bill with the support of the Minnesota Medical Association and the Minnesota Psychiatric Society, and this author testified in support of it. This author garnered the support of these medical associations through separate processes during the twelve months prior to testifying. Testimony included data on the detrimental effects of tobacco availability on the treatment milieu, as well as information indicating the absence of ill effects on patients with mental illness, or their treatment efforts, when tobacco is eliminated.

The Minnesota State Operated Services is Minnesota's title for its state organization that provides publicly funded treatment for mental illness and chemical dependence through outpatient and institutional settings. The State Operated Services' Chief Executive Officer ("CEO") favored the initiative and also testified in support of the bill, but said that State Operated Services could neither advocate for it nor initiate it. When a state senator asked why a law was required to enact a change that the CEO was supporting and could have been implemented without legislation supporting it, the CEO responded that the State Operated Services would not be able to change the facilities to tobacco-free status without a law to mandate such a change. While the CEO clearly wanted such a change, it required support and leadership from the Minnesota Commissioner of Human Services and the State Operated Services' Medical Director, neither of whom responded to notification about the bill's hearing. Prior responses from the commissioner's office indicated an unwill-

141. Conversation between Chief Executive Officer, St. Peter Regional Treatment, and author (1998).

142. S. 1329, 2003 Leg. Sess. 83, MINN. STAT. § 144.414 (2007).

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

ingness to convert Minnesota's state facilities to tobacco-free.¹⁴³ Thus, it was unlikely that the CEO could have garnered the support necessary to make such a change and a legal mandate would avoid the necessity of overcoming this resistance. The state senate committee passed the bill. Efforts were then made by this author to testify before the Minnesota House Health and Human Services Policy Committee in a hearing regarding state-operated services. This was after the bill's sponsor in the house was refused a formal hearing and an attempt by another sponsor was withdrawn. The bill was then debated within a separate ombudsman committee before it was signed into law by Governor Pawlenty in June 2003.¹⁴⁴

In January 2004, Minnesota Statute section 246.0141 went into effect. During the following two legislative sessions, in 2004 and 2005, several psychiatrists testified in support of bills to repeal the law.¹⁴⁵ Their testimony largely focused on the assertion that patients are under stress and that hospitalization is not the right time to force patients to stop smoking. They also maintained that smoking was a source of pleasure for psychiatric patients, and that banning tobacco turned the staff into policemen. While the testimony of these psychiatrists was emotionally compelling and expressed empathy for their patients' desire to continue to smoke in a hospital setting, committee members were made aware, through this author's testimony, that several private psychiatric facilities in Minnesota had been completely tobacco-free for over ten years, with no documentation of detrimental effects on patient care. The competing arguments before the legislative committees were, on the one side, that denial of access to tobacco constituted harsh or even inhumane treatment, but, on the other side, that removing tobacco while treating for nicotine withdrawal causes no harm to patients and even improves treatment milieus. The legislators voiced other compelling state interests, such as concern for patient safety from fire hazards and protecting patients from the general detrimental effects of tobacco. The legislative initiative to repeal the newly enacted law in 2005 was sponsored by a state senator who advocated for patients' right to smoke. The majority of lawmakers, however, were in favor of continuing the tobacco ban, particularly since the Minnesota State Operated Services Director testified in 2005 that the policy was so successful that administration intended on keeping the ban in place even without a law mandating it.

143. Letter from the Minn. Comm'r of Human Services addressed to author (Mar. 18, 2002) (on file with author).

144. MINN. STAT. § 144.414 (2007).

145. See S. Health and Family Security Comm., S.F. 108, 2005 (Minn. 2005); *Senate Highlights*, *supra* note 16; see also *Smoke-Free Facilities*, 21 SESSION WEEKLY 6, 14 (Minn. House of Representatives Public Information, St. Paul, Minn.), Mar. 12, 2004, available at <http://www.house.leg.state.mn.us/hinfo/swkly/2003-04/sw604.pdf#page=14/>.

F. The Legal Challenge to Minnesota Statute Section 246.0141

A civil complaint challenging the constitutionality of Minnesota Statute section 246.0141 was brought by two patients of the Minnesota Security Hospital in 2003.¹⁴⁶ The plaintiffs alleged that the statute violated “their federal Constitutional rights under the First, Fourth, Fifth, Eighth, and Fourteenth Amendments, and their state Constitutional rights under Article I, sections 2, 7, and 10, and Article IV, sections 17 and 19,” as well as their patients’ rights under the Minnesota Commitment statutes.¹⁴⁷ The plaintiffs sought “declaratory and injunctive relief to redress these alleged violations.”¹⁴⁸

The trial court dismissed the complaints with prejudice and stated the court’s findings of fact and conclusions of law in a memorandum.¹⁴⁹ The court found “no constitutional right to smoke or to possess tobacco in a state treatment facility” and concluded that smoking is not a form of speech as the plaintiffs contended.¹⁵⁰ The court also found that, as patients “in a secure treatment facility, [the] Plaintiffs have no reasonable expectation of privacy against search and seizure under the Fourth Amendment.”¹⁵¹ The plaintiffs alleged that the law was “intended as punitive conditions directed solely at Plaintiff’s class whom are private citizens with full citizenship confined as patients in a treatment facility.”¹⁵² The court stated: (1) the language of the statute is unambiguous and “applies to all persons on the grounds of a regional treatment center, not just to the patients”; (2) the “characterization of the legislation as ‘punitive’ is insufficient to state a claim under the Fifth Amendment”; and (3) the “legislation does not impose successive ‘punishment’ on them [the plaintiffs] for any criminal offense.”¹⁵³ The court found that the Eighth Amendment right to be free of cruel and unusual punishment is not a valid claim “in this civil context,” as the plaintiffs were not claiming to be “imprisoned for a criminal offense.”¹⁵⁴ The plaintiffs’ equal protection claims under the Fourteenth Amendment “fail[ed] to make the necessary showing that they were treated differently than others similarly situated.”¹⁵⁵ Although the plaintiffs alleged that they were “treated differently than patients in other types of facilities” (such as nursing homes and veteran homes), the court did not find residents of these other facilities to be similarly situated to patients requiring

146. *Kruger v. Pawlenty*, No. C2-03-10155, 2004 WL 5645011 (Minn. 2d Dist. Ct. Jan. 28, 2004) (dismissing plaintiffs’ complaint).

147. *Id.* at *2.

148. *Id.*

149. *Id.* at *1.

150. *Id.* at *2.

151. *Id.*

152. Summons at 6, *Kruger v. Pawlenty*, No. C2-03-10155 (Minn. 2d Dist. Ct. Sept. 24, 2003).

153. *Kruger*, 2004 WL 5645011, at *3.

154. *Id.*

155. *Id.*

SMOKE-FREE STATE PSYCHIATRIC FACILITY GROUNDS

treatment within a state psychiatric treatment facility.¹⁵⁶ The court found that all persons are subject “to the ban when they are on the premises of these facilities,” therefore “the statute [did] not distinguish between classes of people.”¹⁵⁷

As noted above, plaintiffs claimed that section 246.0141 “violat[ed] their due process rights under Article I, section 7, of the Minnesota Constitution.”¹⁵⁸ The court found that neither a procedural due process nor a substantive due process right was violated.¹⁵⁹ With regard to procedural due process, the court found that the plaintiffs failed to identify “a constitutionally protected property or liberty interest that [was] deprived by the legislation.”¹⁶⁰ In other words, “smoking tobacco and possession of tobacco are not constitutionally protected property or liberty interests” and the plaintiffs did not allege that they were “a suspect class or that smoking [was] a fundamental right.”¹⁶¹ With regard to the substantive due process claim, the court emphasized that “legislation will fail rational basis review only when it rests on grounds irrelevant to the achievement of a plausible government objective.”¹⁶² The court relied on this author’s testimony in determining that the statute met the rational basis test and was not enacted “for the purpose of punishing the patients, as was suggested by the plaintiffs.”¹⁶³ Rather, the court determined through the legislative history that the “statute was enacted for the purpose of enhancing the health of individuals in regional treatment centers.”¹⁶⁴ The statute passed the rational basis review because a plausible government objective, enhancing the health of individuals in treatment centers, was shown.¹⁶⁵ The courts discussed the Fourteenth Amendment as providing that “no member of this state shall be disenfranchised or deprived of any of the rights or privileges secured to any citizen thereof, unless by the law of the land or the judgment of his peers.”¹⁶⁶

The Court of Appeals in Minnesota affirmed the decision of the Ramsey County District Court on February 1, 2005.¹⁶⁷ One appellant argued that the district court had incorrectly relied on matters outside the pleadings when referring to testimony presented before the Senate Health and Family Security Committee of the 2003 Legislative Session. The Court of Appeals determined that the district court used

156. *Id.*

157. *Id.*

158. *Id.*

159. *Id.*

160. *Id.* at *4.

161. *Id.*

162. *Id.* at *3.

163. *Id.* at *4.

164. *Id.*

165. *Id.*

166. *Id.*

167. *Kruger v. Pawlenty*, No. A04-1041, 2005 WL 221929, at *6 (Minn. Ct. App. Feb. 1, 2005).

this testimony in conducting its legal analysis specifically to determine the legislative intent behind enactment of the statute: “The [district] court concluded ‘the statute was enacted for the purpose of enhancing the health of individuals’ We affirm the district court’s use of legislative history in making its legal determination.”¹⁶⁸

The Court of Appeals’ decision emphasized the importance of primary and relevant psychiatric testimony provided to the legislative committee that was relied upon by the trial court. Psychiatrists’ testimony in this instance was an essential component of the legislative process.

VI. CONCLUSION

Efforts to remove smoking from public psychiatric facilities have pitted arguments for patients’ rights, pleasure, and limited purported therapeutic benefits against a growing body of clinical data documenting adverse health effects of smoking and public health data documenting the health and safety benefits of tobacco-free facilities for patients and staff. Opposition to such efforts from both inside and outside of facilities demonstrates that legislative action is a critical element to produce a necessary change. In Minnesota, psychiatric testimony during the legislative process proved necessary for the legislative initiative and was later relied upon by the district court in conducting its rational basis review of the legislation, specifically in determining whether there existed a plausible government objective. The reliance upon psychiatric testimony by the district court in *Kruger v. Pawlenty* was subsequently affirmed by the appellate court as procedurally correct and necessary. While the legislature needs the psychiatric community to inform its decisions regarding the treatment of citizens committed to public treatment facilities, the psychiatric community should utilize the legislative process to successfully remove tobacco from psychiatric treatment facilities. Together, the psychiatric community and state legislatures must work not only to bring about sweeping change, but also to thwart attempts to resist and rescind that change.

168. *Kruger*, 2005 WL 221929, at *2.