

Sigma's 30th International Nursing Research Congress

Mandatory Tobacco Cessation With Inpatient Psychiatric Patients: Behavioral Consequences

Christine Wynd, PhD, RN

Family and Community Health Nursing, Virginia Commonwealth University, Richmond, VA, USA

Purpose:

Hospital administrators and clinicians are becoming increasingly interested in tobacco-free environments in order to protect the public health and prevent second-hand smoke exposure in patients, visitors, and staff. Hospital tobacco-free environments may also encourage patients and staff to adopt smoking cessation activities. For many years, inpatient psychiatric units were exempt from hospital tobacco-free policies due to a high prevalence of patient smoking as well as staff concerns about increases in negative patient behaviors resulting from smoking bans (Evins et al., 2017).

Australia and the United Kingdom were the first to institute and research smoking bans in hospitals and on inpatient psychiatric units. Between the years 2005-2011, U.S. hospitals with tobacco-free policies increased from 20% to 70% (Ruther et al., 2014). Despite many positive results from recently implemented tobacco-free policies, personnel staffing psychiatric inpatient units continue to be concerned about an increase in negative patient behaviors when smoking is removed. The current study was established to examine differences in the numbers of negative behaviors demonstrated by psychiatric inpatients before and after implementation of an institution-wide tobacco-free policy.

Hospital accrediting agencies have published standards requiring facilities to provide smoke-free environments (Ruther et al., 2014) and U.S. hospitals are adopting total smoking ban policies that include inpatient psychiatric units. Research is needed to support or refute increases in patient negative behaviors when smoking and tobacco are banned. Research can also determine the most successful methods for implementing tobacco-free hospital policies, especially in psychiatric/mental health patient areas.

Methods:

A descriptive pre-post design was used to collect data from 322 medical records of inpatient smokers diagnosed with psychiatric disorders before ($n = 162$) and after ($n = 160$) implementation of the tobacco-free policy. The policy was established on a 34-bed, locked inpatient psychiatric unit, located in a large, urban, Midwestern hospital.

Two major data collection periods included four months prior to and four months following implementation of the tobacco-free policy. Data collection procedures involved reviews of patient medical records to collect data about negative behavioral indicators. The hospital medical records department staff provided records for all discharged psychiatric inpatient smokers during the pre- and post-tobacco-free policy time frames. Smokers were identified by DSM V code 305.1, tobacco use disorder (American Psychiatric Association, 2013). Interdisciplinary progress notes, emergency admission forms, and medication administration records (MARs) were reviewed in each medical record to potentially identify negative patient behaviors. In addition, the numbers of references to negative behavioral indicators and "as necessary," or PRN medications, were collected on a data extraction form. Negative behavioral indicators were operationally defined based on the studies of various researchers (Keizer, Gex-Fabry, Bruegger, Croquette, & Khan, 2013; Riad-Allen, Dermody, Herman, Bellissimo, Selby, & George, 2017). Differences in the numbers of negative behavioral indicators (physical/verbal agitation, use of PRN medications, restraints, isolation, and calls to security) were identified, counted, and analyzed using independent t-tests.

Prior to the institution of the smoking ban, a nicotine replacement therapy (NRT) protocol was developed to guide clinical management of nicotine withdrawal (Leyro, Hall, Hickman, Kim, Hall, & Prochaska, 2013). The protocol consisted of offering NRT directly on admission, educating patients about the benefits of quitting smoking, as well as the benefits of NRT for overcoming nicotine withdrawal symptoms, and providing smoking cessation education and behavioral counseling in addition to the NRT pharmacologic therapy. Increases in the use of NRT were also examined during the study period.

Results:

During the four-month pre-smoking ban phase, 35% of discharged psychiatric inpatients were smokers ($n = 162$ out of 463 patients). During the four-month post-smoking ban phase, 33% of discharged patients were smokers ($n = 160$ out of 481). Independent t-tests used to examine differences in the numbers of patient-related negative behavioral indicators before and after implementation of the tobacco-free policy demonstrated significantly fewer incidents of patient physical agitation ($t [df = 320] = 3.45, p = .001$) following the smoking ban. The numbers of other negative behaviors remained unchanged, which meant that there were no increases in negative behaviors.

Prior to the tobacco ban only 4% of patients (7 out of 162 patients) received physicians' orders for NRT while admitted to the inpatient unit. Following implementation of the tobacco-free policy, 69% of patients admitted to the psychiatric unit (111 out of 160 patients) received NRT.

Conclusions:

The current study contributes to a growing body of international research demonstrating that hospital inpatient psychiatric unit tobacco-free policies can be successfully implemented without increases in patient negative behaviors (Keizer et al., 2013; Lawn & Campion, 2013; Riad-Allen et al., 2017). Nurses lead the way toward effective smoke-free environments through consistent enforcement of such policies, and nurses with knowledge of smoking cessation interventions, pharmacological treatment in the form of NRT, and psychological support are successful in providing care to mentally ill patients who smoke (Keizer et al., 2013; Stockings et al., 2015; Thomas & Richmond, 2017).

Evins et al. (2017) suggest that NRT is the most effective treatment for preventing withdrawal symptoms in patients admitted to tobacco-free psychiatric units. The current study demonstrated that patients receiving NRT experienced less physical agitation. With greater use of NRT on psychiatric units, special attention to drug interactions will become an increasingly key factor requiring the attention of mental health nurses. Patients and their families require education about the pharmacological effects of all drug therapies, and nurses must emphasize and educate other providers about the differences between symptoms of nicotine withdrawal and symptoms of the mental health disorders themselves so that patient recovery is facilitated (Mackay, 2016).

Future research is needed to examine the impact of tobacco-free policies on patient intentions to quit smoking so that hospitalization may help to "jumpstart" patient cessation efforts following discharge. Support for patients who quit smoking during hospitalization will require counseling and behavioral incentives, particularly to encourage long-term maintenance of cessation following discharge. Researchers recommend that all patients receive supplemental cessation education and psychological support in the form of counseling and support groups combined with NRT to provide the best combination for tobacco cessation success (Lawn & Campion, 2013; Stockings et al., 2015).

Nurses are in key positions to educate mental health care providers including physicians, counselors, and mental health aides, about the special characteristics and issues related to tobacco and nicotine dependence. Researchers assert that strong, visible leadership, interdisciplinary collaboration among mental health care providers, and strict and consistent enforcement of tobacco-free policies will increase the likelihood of successful inpatient smoke-free environments (Lawn & Campion, 2013).

Title:

Mandatory Tobacco Cessation With Inpatient Psychiatric Patients: Behavioral Consequences

Keywords:

Inpatient psychiatric units, Negative behaviors and Tobacco-free policy

References:

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed., text revision). Washington, DC: Author.

Evins, E., Hoepfner, S.S., Schoenfeld, D.A., Hoepfner, B.B., Cather, C., Pachas, G.N., Cieslaka, K.M., & Maravica, M.C. (2017). Maintenance pharmacotherapy normalizes the relapse curve in recently abstinent tobacco smokers with schizophrenia and bipolar disorder *Schizophrenia Research*, *183*, 124–129.

Keizer, I., Gex-Fabry, M., Bruegger, A., Croquette, P., & Khan, A.N. (2013). Staff representations and tobacco-related practices in a psychiatric hospital with an indoor smoking ban. *International Journal of Mental Health Nursing*, *23*(2), 171-182.

Lawn, S., & Campion, J. (2013). Achieving smoke-free mental health services: Lessons from the past decade of implementation research. *International Journal of Environmental Research and Public Health*, *10*(9), 4224-4244.

Leyro, T.M., Hall, S. M., Hickman, N., Kim, R., Hall, S.E., & Prochaska, J.J. (2013). Clinical management of tobacco dependence in inpatient psychiatry: Provide practices and patient utilization. *Psychiatric Services*, *64*(11), 1161-1165.

Mackay, A. (2016). The human rights implications of smoking bans in closed environments: What Australia may learn from the international experience. *International Journal of Law, Crime, and Justice*, *46*, 13-30.

Riad-Allen, L., Dermody, S.S., Herman, Y., Bellissimo, K., Selby, P., & George, T.P. (2017). Becoming tobacco-free: Changes in staff and patient attitudes and incident reports in a large academic mental health and addictions hospital. *American Journal of Addiction*, *26*(2), 183-191.

Ruther, T., Bobes, J., De Hert, M., Svensson, T.H., Mann, K., Batra, A., Gorwood, P., & Moeller, H.J. (2014). EPA guidance on tobacco dependence and strategies for smoking cessation in people with mental illness. *European Psychiatry*, *29*, 65-82.

Stockings, E.A., Bowman, J.A., Bartlem, K.M., McElwaine, K.M, Baker, A.L., Terry, M., Clancy, R., Knight, J., Wye, P.M., Kim Colyvas, K., & Wiggers, J.H. (2015). Implementation of a smoke-free policy in an inpatient psychiatric facility: Patient-reported adherence, support, and receipt of nicotine-dependence treatment. *International Journal of Mental Health Nursing*, *24*(5), 322-331.

Thomas, M., & Richmond, R. (2017). Addressing the arguments against implementation of smoke-free policies in psychiatric facilities. *Journal of Psychiatric and Mental Health Nursing*, *24*(5), 322-331.

Abstract Summary:

A mandatory tobacco cessation policy was established on an inpatient psychiatric unit. The numbers of negative behavioral indicators (physical/verbal agitation, use of PRN medications, restraints, isolation, and calls to security) were identified and analyzed to determine if there were significant differences before and after the policy was established.

Content Outline:

I. Introduction

A. Problem Statement: Hospitals are now actively committed to becoming tobacco-free due to:

1. Social responsibility and pledge to public health
2. Preventing second-hand smoke exposure
3. Hospital tobacco-free environments may also encourage patients and staff to adopt smoking cessation activities
4. Staff concerns about increases in psychiatric inpatient negative behaviors following a smoking ban

B. Purpose: To examine differences in the numbers of negative behaviors demonstrated by psychiatric inpatients before and after implementation of an institution-wide tobacco-free policy.

II. Body

A. Study Significance

1. Hospital accreditation standards requiring tobacco-ban policies
2. Inpatient psychiatric units exempt in past from tobacco-free policies due to:
3. High prevalence of patient smoking
4. Staff concerns about increased negative patient behaviors if smoking no longer allowed
5. Situation now changing with increasing hospital/health care emphasis on health promotion/disease prevention.
6. Research needed to support or refute relevant increases in patient negative behaviors.
7. Research also needed to determine the most successful methods for implementing tobacco-free hospital policies in psychiatric/mental health inpatient areas.

B. Methods

1. Design: Descriptive pre-post design
2. Setting: 34-bed, locked inpatient psychiatric unit, located in a large, urban, Midwestern hospital.
3. Sample: 322 inpatient smoker medical records pre- ($n = 162$) and post- ($n = 160$) tobacco-free policy
4. Measures:
 - o Differences in numbers of negative behavioral indicators: physical agitation, verbal agitation, use of PRN medications, restraints, isolation, calls to security
 - o Use of nicotine replacement therapy (NRT) pre- and post-tobacco ban
5. Data analysis: independent t-tests

C. Results - Following establishment of a tobacco-free policy there were:

1. Significantly fewer incidents of patient physical agitation ($t [df = 320] = 3.45, p = .001$)
2. Significantly fewer incidents of patient physical agitation ($t [df = 320] = 3.45, p = .001$)
3. No significant differences in the numbers of other types of negative behaviors; in other words, negative behaviors did not increase
4. Significant increases in NRT use - 69% of patients admitted to the psychiatric unit (111 out of 160 patients)

D. Discussion, Findings, and Implications for Practice and Research

1. Study contributes to a growing body of international research demonstrating that hospital inpatient psychiatric unit tobacco-free policies can be successfully implemented without increases in patient negative behaviors
2. Nurses with knowledge of smoking cessation interventions, pharmacological treatment in the form of NRT, and psychological support are often successful in providing care to mentally ill patients who smoke
3. NRT is the most effective treatment for preventing withdrawal symptoms in patients admitted to tobacco-free psychiatric units. The current study demonstrated that patients receiving NRT experienced less physical agitation
4. Future research is needed to examine the impact of tobacco-free policies on patient intentions to quit smoking so that hospitalization may help to "jumpstart" patient cessation efforts following discharge

III. Conclusions

A. Results of current study are significant to the establishment of tobacco-free policies in hospital inpatient psychiatric units

B. Information can be used to develop heightened psychiatric care NRT protocols, interventions for patients who smoke

C. Future work will involve the development of interventions for reducing or eliminating smoking in psychiatric patients and the staff members who provide their care

First Primary Presenting Author

Primary Presenting Author

Christine Wynd, PhD, RN

Virginia Commonwealth University

Family and Community Health Nursing

Department Chair

Richmond VA

USA

Author Summary: Dr. Christine Wynd is Professor and Chair, Department of Family/Community Health Nursing, at the Virginia Commonwealth University School of Nursing. A nurse educator for over 40 years, Dr. Wynd's career includes coordinating a master's level nursing administration track, directing a PhD in Nursing program, and Dean of Nursing at Ursuline College, Cleveland, Ohio. Her research focus is health promotion, particularly smoking cessation, and she has presented and published her research both nationally and internationally.