

Substance Abuse Cessation for Veterans Coping with Mental Illness

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Disclaimer

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Objectives

- Identify the impact of tobacco use on Veterans diagnosed with substance use disorders.
- Identify the significance of tobacco use among Veterans coping with mental illness.
- Identify treatment interventions for tobacco cessation, both pharmacological and behavioral.
- Identify the impact of a residential substance abuse program that includes a formal smoking cessation component on Veterans who abused drugs/alcohol and tobacco.

Treating Tobacco Use and Dependence

http://www.guideline.gov/summary/summary.aspx?doc_id=12520&nbr=006444&string=tobacco



"Our lack of progress in tobacco control is more the result of failure to implement proven strategies than the lack of knowledge about what to do."

David Satcher, M.D., Ph.D. Surgeon General

The Problem

- Tobacco kills over 443,000 Americans every year
- Just under half of all cigarettes smoked in America are smoked by people with a substance use disorder or a mental illness.
- It is estimated that 26.2% of Americans age 18 and older suffer from a diagnosable mental illness in a given year.
- Approximately 25-40% of Veterans enrolled in the VA health system have a psychiatric disorder.



The Veterans Administration

- Veterans receiving care in the Veterans Administration (VA) healthcare system are disproportionately affected by smoking-related illnesses as they smoke at higher rates than the general population.



Tobacco and Substance Abuse

- Nationally, 77-93 percent of clients in substance abuse treatment settings use tobacco, triple the national average.
- Among clients in substance abuse treatment, 51 percent died of tobacco-related causes, double the national average. Lasser et al., 2000



Why focus on tobacco?

- While in substance abuse treatment, the emphasis is on illicit substances and alcohol.
- Tobacco dependence is the greatest contributor to disease and death in the substance use disorder population.
- Tobacco dependence causes more deaths than all deaths from HIV, illegal drug use, alcohol use, motor vehicle injuries, suicides and murders combined.



Research Question

- This program evaluation examined the impact of a residential substance abuse program that included a formal smoking cessation component on Veterans who abused drugs/alcohol and tobacco.



Review of Literature

- Smoking cessation counseling and treatment during substance abuse treatment
 - does not adversely affect abstinence rates from alcohol and drugs of abuse. (Level of Evidence 1b)
 - positively affects abstinence rates from alcohol and drugs of abuse. (Level of Evidence 1b)
 - does not adversely affect smoking cessation rates. (Level of Evidence 1b)

Research: Setting and Sample

- Veterans of the United States Armed Forces are eligible for treatment
- Men and women ages 18 and older
- Admitted to the Salem Veterans Affairs Medical Center Substance Abuse Residential Rehabilitation Program (SARRTP) from May 1, 2012 through December 31, 2012
- Reported tobacco use within one month prior to admission to the program



The Tobacco Cessation Program

- Topics:
 - the health benefits of tobacco cessation
 - personal reasons for tobacco cessation
 - coping with triggers
 - breathing techniques for stress management
 - strategies to reduce smoking
 - quit date preparation
 - identifying supportive people
 - weight management strategies, exercise tips
 - dealing with slips and relapse
 - medications for tobacco cessation

The Process

- Veteran admitted to SARRTP
- Nicotine dependence added to problem list in EMR
- Clinical reminders for Tobacco Cessation completed on admission
- Consult to Tobacco Cessation Program placed
- Consult acknowledged
- Tobacco use disorder and treatment added to interdisciplinary treatment plan
- Veteran participates in Tobacco Cessation groups three times weekly
- Progress notes entered with each encounter
- Upon discharge from SARRTP, tobacco cessation medications ordered as appropriate with follow-up during aftercare visits and one month post-discharge

Protection of Human Subjects

- All Veterans admitted to SARRTP who used tobacco were assigned to the Tobacco Cessation Group within the Substance Abuse Program.
- All Veteran information was blinded to protect the identity of the participants.
- Full IRB approval at both the Salem Veterans Affairs Medical Center and the University of Virginia was obtained.



Research: Procedures

- Diagnostic information for substance use and other mental health disorders was obtained from the electronic medical records of each Veteran admitted to SARRTP.
- Veterans were classified as having a substance use disorder with or without co-occurring psychiatric disorders (yes/no).
- Socio-demographic data was gathered from the SARRTP Screening Packet including age, race, gender, income, education and marital status.
- Tobacco use status and motivation to quit using tobacco was assessed during preadmission screening, on admission, and with each follow-up.

Research: Measures

- Days of use for alcohol, other drugs, and tobacco
- Stages of change for tobacco cessation
- Pharmacotherapy prescribed
- Adherence to pharmacotherapy
- Biomarkers for substance use, including urine drug screens and breathalyzers along with self-report of use
- Workbook progression
- Measurements taken at four points in time, on admission, two-weeks following admission, at graduation, and at one month follow-up

Statistical Analyses

- Statistical Package for the Social Sciences (SPSS)
- Descriptive analyses were conducted for all demographic data & complete abstinence rates.
- In order to examine changes in alcohol and other drug use, *t*-tests were performed that compared the month prior to treatment to the month following treatment.
- An analysis of variance (ANOVA) with repeated measures was conducted to examine change in tobacco use over four points in time.

Veterans Lost to Follow-up

- Demographic and baseline descriptive variables were compared for those who completed the 1-month follow-up ($n = 97$) to those who did not ($n = 40$).
- Chi-squares analysis compared categorical variables and independent *t*-tests examined continuous variables.
- No statistical significance was noted on any of the variables.

Baseline Demographics
N=137

Characteristics		N	%
Education	9 th grade or less	7	5.1
	Some high school	34	24.8
	High school graduate	45	32.8
	Some college/technical	43	31.4
	Bachelor's degree	7	5.1
	Master's degree	1	0.7

Baseline Demographics
N=137

Characteristics		N	%
Gender	Male	131	95.6
	Female	6	4.4
Race	African American	57	41.6
	Caucasian	78	56.9
	Hispanic	1	0.7
	Other	1	0.7
Marital Status	Never married	23	16.8
	Married	24	17.5
	Separated	22	16.1
	Divorced	62	45.3
	Widowed	6	4.4

Baseline Demographics
N=137


Characteristic		N	%
Psych Dx	Yes	80	58.4
	No	57	41.6
Drug Dx	Yes	107	78.1
	No	30	21.9
Alcohol Dx	Yes	115	83.9
	No	22	16.1

Baseline Demographics
N=137

	N	Minimum	Maximum	Mean	S.D.
Age	137	24	70	48.41	11.30
Monthly Income	137	0	5552	1121.06	1195.10

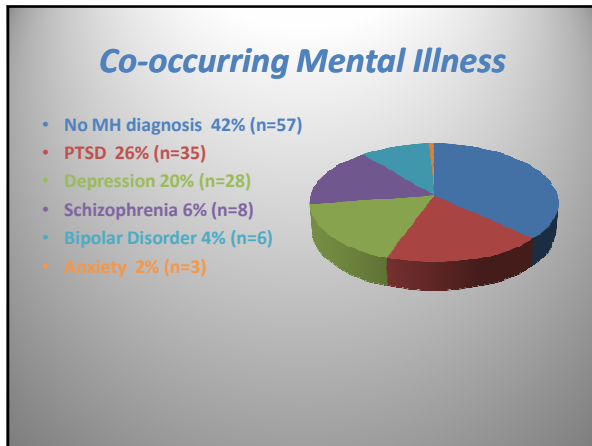
Stages of Change

Pre-contemplation - not ready
 Contemplation - maybe within 6 months
 Preparation - probably within 30 days, taking steps towards behavior change
 Action - actively changing the behavior
 Maintenance - change has lasted 6 months



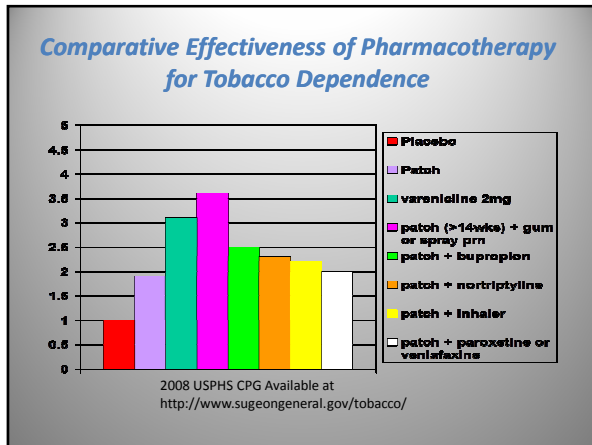
Stages of Change for Quitting Tobacco

Stage of Change	Baseline N=137	Two weeks N=121	Graduation N=116	One month follow-up N=97
Precontemplation	43 (31.4%)	14 (11.6%)	0 (0.0%)	24 (24.7%)
Contemplation	42 (30.7%)	25 (20.7%)	19 (16.4%)	23 (23.7%)
Preparation	47 (34.3%)	69 (50.4%)	70 (60.3%)	30 (30.9%)
Action	5 (3.6%)	69 (50.4%)	14 (12.1%)	20 (20.6%)
Maintenance	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)



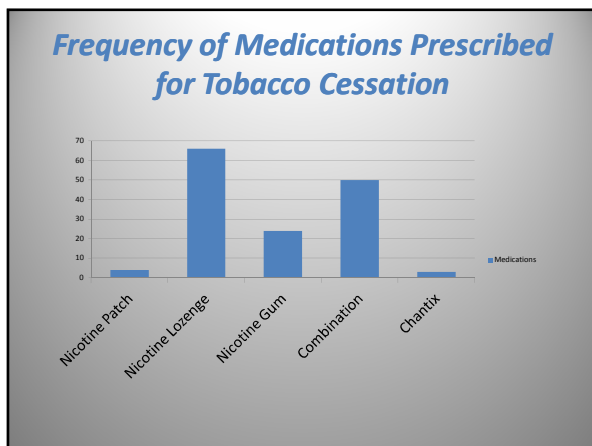
Types of Substances Abused Among Veterans Enrolled

Type of Substance	N = 137	%
Alcohol	105	37%
Cocaine	53	19%
Opiates	49	17%
Cannabis	47	16%
Polysubstance	29	10%
Benzodiazapines	2	1%
Amphetamines	1	<1%



Pharmacotherapy

- Pharmacotherapy used included nicotine patches, nicotine lozenges, nicotine gum, and Varenicline.
- Wellbutrin was not prescribed during this study period.
- Varenicline was prescribed to three Veterans.



Pharmacotherapy Adherence

	Baseline (n = 44/137) 32.1%	2-week (n = 83/121) 68.6%	Discharge (n = 90/116) 77.6%	Follow-up (n = 67/ 97) 69.1%
Adherent	42 (95.5%)	83 (100%)	90(100%)	64 (95.5%)
Non-adherent	2 (4.5%)	0 (0%)	0 (0%)	3 (4.5%)

Means and Standard Deviations for Percentage Days of Use

Variable	Baseline		2-week		Discharge		Follow-up	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	(N = 137)		(n = 121)		(n = 116)		(n = 97)	
Alcohol	30.92	31.43	0.00	--	0.00	--	4.22	18.32
Drugs	27.47	32.60	0.00	--	0.00	--	4.00	18.25
Tobacco	85.51	22.96	83.25	28.17	88.28	31.69	80.91	35.40

Abstinence Outcomes

Variable	Baseline	2-week	Discharge	Follow-up
	(N = 137)	(n = 121)	(n = 116)	(n = 97)
Alcohol	23.4% (n = 32)	100.0% (n = 121)	100.0% (n = 116)	90.7% (n = 88)
Drugs	32.1% (n = 44)	100.0% (n = 121)	100.0% (n = 116)	91.8% (n = 89)
Tobacco	0.1% (n = 0)	8.3% (n = 10)	11.2% (n = 13)	14.4% (n = 14)

Biomarkers and Self-Report at One Month Follow-up (n=97)

Variable	Positive for Use	Negative for Use
Urine Drug Screen (n=54)	4 (7%)	50 (93%)
Breathalyzer (n=54)	0	54 (100%)
Self-Report (n=43)	6 (6%)	91 (94%)

Clinical Implications

- Tobacco use by Veteran populations coping with mental illness and/or substance use disorders is significant and must be addressed throughout mental health treatment.
- Addressing tobacco cessation should be a critical component of substance abuse treatment since such programs have a positive effect upon abstinence rates from alcohol and drugs of abuse.

Research Limitations

Lack of randomization
 Compliance bias
 Social desirability bias
 Lack of biochemical verification of tobacco abstinence



Research Strengths

- Large, diagnostically diverse sample
- Longitudinal data collection
- Findings could serve as a model for the development of integrated tobacco cessation programming during SARRTP programs throughout the VA

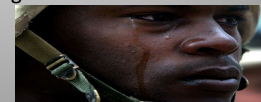


How Does the Research Relate to the Literature?

- Since there was no comparison condition, conclusions about causation cannot be drawn regarding alcohol, other drug, or tobacco use outcomes.
- However, findings appear consistent with previous research in that the intervention did not appear to adversely impact alcohol, other drug, or tobacco use outcomes.

Future Research and Development

- Effective programs and tools must be developed, utilized, and evaluated in the treatment of tobacco use disorders in Veterans with mental illness and/or substance use disorders.
- Healthcare education must incorporate tobacco cessation education into the curriculum.
- Nursing needs to have a greater role in tobacco cessation treatment.



References

- American Psychiatric Association. (2011). *Diagnostic and Statistical Manual of Mental Disorders, 6th Edition*. Washington, DC: American Psychiatric Association.
- Baca, C. T., Yabne, C. E., (2009). Smoking cessation during substance abuse treatment: What you need to know. *Journal of Substance Abuse Treatment, 36*, 205-219.
- Beckham, J., Roodman, A., Shipley, R., Hertzberg, M., Cunha, G., Kudler, H.,... Fairbank, J. A. (1995). Smoking in Vietnam combat veterans with post-traumatic stress disorder. *Journal of Traumatic Stress, 8* (3), 461-472.
- Burling, T., Burling, A., Litini, D. (2001). A controlled smoking cessation trial for substance-dependent inpatients. *Journal of Consulting and Clinical Psychology, 69*:295-304.
- Burling, T. A., Marshall, G. D., Seidner, A. L. (1991). Smoking cessation for substance abuse inpatients. *Journal of Substance Abuse, 3*(3), 269-276.
- Cradock-O'Leary, J., Young, A. S., Yano, E. M., Wang, M., Lee, M. L. (2002). Use of general medical services by VA patients with psychiatric disorders. *Psychiatry Service, 53*(1), 874-878.
- Dalack, G., Meador-Woodruff, J. (1999). Acute feasibility and safety of a smoking reduction strategy for smokers with schizophrenia. *Nicotine & Tobacco Research 1*:53-57.
- Duffy, S. A., Essenmacher, C., Karvonen-Gutierrez, C., Ewing, L. A. (2010). Motivation to Quit Smoking among Veterans Diagnosed with Psychiatric and Substance Abuse Disorders. *Journal of Addictions Nursing, 21*(2&3), 105-113.
- el-Guebaly, N., Cathcart, J., Currie, S., Brown, D., & Gloster, S. (2002). Smoking cessation approaches for persons with mental illness or addictive disorders. *Psychiatric Services, 53*(9), 1166-1170.

References

- Evins, A.E., Cather, C., Deckersbach, T., Freudenreich, O., Culhane, M., Olm-Shipman, C.M., ... Rigotti, N. (2005) A double-blind placebo-controlled trial of bupropion sustained-release for smoking cessation in schizophrenia. *Journal of Clinical Psychopharmacology, 25*(3), 218-225.
- Gariti, P., Alterman, A., Mulvaney, F., Mechanic, K., Dhopes, V., Yu, E.,... Sacks, D. (2002). Nicotine intervention during detoxification and treatment for other substance use. *The American Journal of Drug and Alcohol Abuse, 28*(4), 671-679.
- Grant, B.F., Hasin, D. S., Chou, P., Stinson, F. S., Dawson, D. A. (2004). Nicotine dependence and psychiatric disorders in the United States. *Archives of General Psychiatry 61*(11), 1107-115.
- Hayford, K. E., Patten, C. A., Rummans, T. A., Schroeder, D. R., Offord, K. P., Croghan, I. T.,...Hurt, R. D. (1999). Efficacy of bupropion for smoking cessation in smokers with a former history of major depression or alcoholism. *British Journal of Psychiatry, 174*(2), 173-178.
- Hughes, J. (1993). Treatment of smoking cessation in smokers with past alcohol/drug problems. *Journal of Substance Abuse Treatment, 10*:181-187.
- Hurt, R. D., Offord, K. P., Croghan, I. T., Gomez-Dahl, L., Kottke, T. E., Morse, R. M., Melton, L. J. (1996). Mortality following inpatient addictions treatment. *Journal of the American Medical Association, 275* (14), 1097-1103.
- Kalman, D., Hayes, K., Colby, S. M., Eaton, C. A., Rohsenow, D. J., & Monti, P. M. (2001). Concurrent versus delayed smoking cessation treatment of persons in early alcohol recovery: A pilot study. *Journal of Substance Abuse Treatment, 20*, 233-238

References

- Landolt, K., Ajdacic-Gross, V., Angst, J., Merikangas, K., Gamma, A., Rossler, W. et al. (2010). Smoking and psychiatric disorders: Have subthreshold disorders been overlooked? *Nicotine & Tobacco Research 12*(5): 516-520.
- Lasser, K., Boyd, J. W., Woolhandler, S., Himmelstein, D. U., McCormick, D., Bor, D.H. (2000). Smoking and mental illness: A population-based prevalence study. *Journal of the American Medical Association, 284*(20), 2606-2610.
- Martin, J. E., Calfas, K. J., Patten, C. A., Polarek, M., Hofstetter, C. R., Noto, J., Beach, D. (1997). Prospective evaluation of three smoking interventions in 205 recovering alcoholics: One-year results of Project SCRAP-Tobacco. *Journal of Consulting and Clinical Psychology, 65*, 190-194.
- Reid, M. S., Fallon, B., Sonne, S., Flaminio, F., Nunes, E. V., Jiang, H., ...Rotrosen, J. (2008). Smoking cessation treatment in community-based substance abuse rehabilitation programs. *Journal of Substance Abuse Treatment, 35* (1), 68-77.
- VA (Department of Veterans Affairs). 2004. VA in the Vanguard: Building on Success in Smoking Cessation. Edited by S. Isaacs, S. Schroeder and J. Simon. San Francisco, CA: Department of Veterans Affairs.
- Veterans Health Administration (2006). Integrating tobacco cessation treatment into mental health care: Conference Summary, May 4-5, 2006.
- Ziedonis, D. M., Kosten, T. R., Glazer, W. M., Frances, R. J. (1994). Nicotine dependence and schizophrenia. *Hospital and Community Psychiatry, 45*, 204-206.