

BRIEF: TOBACCO AND OPIOIDS



The United States is currently experiencing a public health emergency related to opioid misuse and overdose; more people died from an opioid overdose in 2017 than ever before. This brief explores the connection between the opioid epidemic and cigarette smoking, the leading preventable cause of death and disease in the U.S. Within the context of the opioid epidemic, states and health systems can utilize tobacco cessation strategies and policies as tools to potentially help achieve the mutually reinforcing goals of independence from both opioids and tobacco.

TOBACCO AND OPIOIDS: THE CONNECTION

Quitting smoking significantly reduces the risk for tobacco-related disease and death, yet cigarette smoking remains the leading cause of preventable death and disease in the United States.² Emerging information suggests that cigarette smoking may be a predictor of risk for opioid misuse.³ While smoking rates have decreased over the past decade and are at historically low levels, people with substance use disorders (SUDs) continue to smoke at high rates.⁴ In 2009, one study found that over half of individuals with SUDs smoked cigarettes.⁵Two additional small studies also suggest the prevalence of cigarette smoking can be high in SUD populations. These studies, while limited in scope, found the smoking prevalence to be as high as 95 percent in those with an opioid use disorder (OUD) and 83 percent in OUD patients being treated with methadone.^{6,7,8} Still, another study found that patients who both smoke and have behavioral health disorders will die earlier, due to a smoking related illness, than their counterparts who have a behavioral health disorder and do not smoke.9

With overlapping physiologic pathways, nicotine addiction and opioid addiction appear to be mutually reinforcing. 10,11,12 Additionally, cigarette smoking and chronic pain have been found to interact in ways that might make smokers with chronic pain especially susceptible to opioid misuse. 13,14,15 Some research also indicates the frequency of repeated prescriptions for opioids may be higher for people with a history of smoking. ¹⁶ Conversely, research suggests that smoking cessation could improve substance use recovery outcomes and may increase long-term abstinence from substances, including opioids. 17,18,19 The interconnection between tobacco use and OUD presents an opportunity to integrate tobacco cessation interventions into OUD treatment - addressing tobacco use and OUD together has the potential to help many people be more successful in their recovery from opioid addiction and in quitting smoking.

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INTEGRATION OF TREATMENT

Individuals with behavioral health conditions want to and are able to quit smoking, but may require more intensive treatment.^{20,21} One study found that just under half of clients in treatment programs for SUDs who also smoked reported a past year quit attempt.²² Further research has found individuals being treated with methadone maintenance have a high interest in smoking cessation, but a below average quit rate.^{23,24} This suggests persons with SUDs, including those with OUD, might benefit from specialized tobacco cessation treatment.

Behavioral health treatment centers are key settings for delivery of evidence-based tobacco cessation interventions to persons with SUDs.²⁵ Behavioral health providers have an important role to play in delivering these interventions.²⁶ A 2015 study suggested that receiving tobacco dependence treatment from addiction treatment clinicians was strongly and positively associated with past year quit attempts.²⁷ However, there is a gap in implementation of tobacco cessation interventions in substance use treatment facilities. The 2016 National Survey of Substance Abuse Treatment Services found that, among substance use treatment facilities in the U.S., tobacco cessation interventions were not universal.^{28,29} Only 64 percent screened for tobacco use, 47.4 percent provided cessation counseling, 26.2 percent offered nicotine replacement therapy and only 20.3 percent offered non-nicotine tobacco cessation medications.

Even when treatment facilities do have integrated programs, additional barriers exist, including inadequate staff training, misconceptions regarding tobacco and substance use treatment and limited tobacco dependence treatment resources.³⁰

APPROACHES FOR INTEGRATING TOBACCO DEPENDENCE TREATMENT INTO SUBSTANCE USE TREATMENT

Despite these barriers, effective approaches are available for addressing tobacco use and dependence among persons with SUDs. These interventions can be implemented at the clinical, program and system levels to address cigarette smoking in individuals with OUD and other SUDs.³³ Below are strategies states and health systems can use to address the comorbidity of nicotine and opioid dependence.

• Utilize resources that are covered by the patient's healthcare coverage. Under the Affordable Care Act, most types of health insurance are required to cover the Essential Health Benefits[†], which include OUD treatment and smoking cessation treatment.³¹ Together, Medicaid and private insurance cover nearly eight in ten non-elderly adults with OUD and, therefore, have some power to help combat the opioid epidemic.³² Tapping into these existing healthcare infrastructures can provide an opportunity to concurrently address opioid and tobacco dependence.



^{*}Essential Health Benefits: A set of 10 categories of services health insurance plans must cover under the Affordable Care Act (42 U.S. Code § 18022). These include doctors' services, inpatient and outpatient hospital care, Emergency services, prescription drug coverage, pregnancy and childbirth, mental health services and substance abuse disorders, rehabilitative and habilitative services and devices, laboratory services, preventive and wellness services and chronic disease management and pediatric services, including oral and vision care. For more information, please see: https://www.federalregister.gov/documents/2013/02/25/2013-04084/patient-protection-and-affordable-care-act-standards-related-to-essential-health-benefits-actuarial

- Integrate smoking cessation into SUD treatment plans, including routinely screening for, and documenting, tobacco use. Tobacco use screening and intervention is one of the most cost-effective clinical preventive services available. Many people who smoke cite a physician's advice to quit as an important motivator for attempting to quit.³³ Evidence-based treatments for tobacco dependence, including FDA-approved medication and counseling, can be utilized concurrently with treatment for other SUDs. Additionally, connecting clients with evidence-based cessation resources to provide continuity of care and ongoing support can enhance intervention. SUD treatment programs that implement tobacco dependence interventions, including NRT and individual and group therapy, have been found to achieve higher overall treatment completion rates.^{34,35}
- Implement health systems changes to facilitate integration of tobacco dependence treatment into SUD treatment. Systems change can help healthcare systems deliver cessation treatment in a consistent manner. Building tobacco use screening and treatment into the clinical workflow can help tobacco dependence treatment become part of standard and routine care. SUD treatment centers can integrate tobacco use questions into their routine intake process and document whether tobacco cessation interventions need to be part of the patient's overall SUD treatment. Some electronic health record (EHR) systems already include tobacco cessation features that incorporate the five A's - Ask, Advise, Assess, Assist and Arrange – providing an opportunity to modify and expand EHRs in SUD treatment centers to include such features. With the increased adoption of EHRs, system-level reminders can prompt staff to screen, assess and treat tobacco dependence routinely. There is evidence to suggest that this works in other settings. One study conducted in a medical center found that adding just two smoking-related vital sign questions ("Current smoker?" and "Plan to quit?") in an EHR increased the identification of patients who smoke by 18 percent and doubled plans to quit.³⁶
- Implement tobacco-free campus policies at substance use treatment centers. De-normalizing tobacco use among populations in recovery and in treatment settings is a critical support for both staff and patients in their efforts to quit. Tobacco-free campus policies prohibit use of any tobacco product (including e-cigarettes) by anyone in indoor spaces and on all outdoor grounds. Such policies have been associated with lower smoking rates among clients, increased receipt of tobacco-related services among clients and decreased frequency of staff and clients smoking together.³⁷
- Educate substance use treatment program providers and staff about the health effects of tobacco **use and tobacco dependence treatment.** There are many programs available to increase staff awareness and knowledge of strategies to deliver tobacco cessation treatment. Treatment centers can utilize educational programs such as the National Association of Alcoholism and Drug Abuse Counselors' (NAADAC) National Certificate in Tobacco Treatment Practice and continuing education credits offered by organizations like the University of California San Francisco's Smoking Cessation Leadership Center, the University of Massachusetts Medical School's Center for Tobacco Prevention and Control and the University of Wisconsin Medical School's Center for Tobacco Research and Intervention to increase staff awareness and knowledge of strategies to utilize in tobacco cessation.³⁷

CONCLUSION

In 2015, only 13 states required provision of tobacco cessation treatment in substance use and/or mental health treatment centers to encourage concurrent treatment.³⁹ The relationship between cigarette smoking and SUD, including OUD, presents an opportunity for more states to benefit from integrated treatment for opioid and tobacco dependence. While evidence suggests a relationship between these disorders, more research is needed to further explore this association and potential opportunities to fight the dual epidemic of OUDs and smoking.



- ¹U.S. Department of Health and Human Services. (2018, March 6). What is the U.S. Opioid Epidemic? Retrieved from https://www.hhs.gov/opioids/ about-the-epidemic/index.html; Scholl L, Seth P, Kariisa M, Wilson N, Baldwin G. Drug and Opioid-Involved Overdose Deaths - United States, 2013-2017. MMWR Morb Mortal Wkly Rep 2019;67:1419-1427. DOI: http://dx.doi.org/10.15585/mmwr.mm675152e1
- ²US Department of Health and Human Services. The health consequences of smoking—50 years of progress: a report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, CDC; 2014. Available at http://www.surgeongeneral.gov/library/reports/50-years-of-progress/fullreport.pdf
- ³Michna, E., Ross, E.L., Hynes, W.L., Nedeljkovic, S.S, Soumekh, S., Janfaza, D., et al. (2004, Sept). Predicting Aberrant Drug Behavior in Patients Treated for Chronic Pain: Importance of Abuse History. Journal of Pain and Symptom Management. Retrieved from https://www.sciencedirect.com/science/article/ pii/S0885392404001915
- ⁴Chun, J., Haug, N.A., Guydish, J.R., Sorensen, J.L., Delucchi, K. (2009, October 4). Cigarette Smoking Among Opioid-Dependent Clients in a Therapeutic Community. The American Journal on Addictions. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2756535/pdf/nihms-125234.pdf 5Lawrence, D., Mitrou, F., Zubrick, S.R. (2009, August 7). Smoking and mental illness: results from population surveys in Australia and the United States. BioMed Central. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2734850/pdf/1471-2458-9-285.pdf
- 6Chun, J., Haug, N.A., Guydish, J.R., Sorensen, J.L., Delucchi, K. (2009, October 4). Cigarette Smoking Among Opioid-Dependent Clients in a Therapeutic Community. The American Journal on Addictions. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2756535/pdf/nihms-125234.pdf ⁷Guydish, J., Passalacqua, E., Pagno, A., et al. (2015, September 22). An International Systematic Review of Smoking Prevalence in Addiction Treatment. Addiction. Retrieved from https://onlinelibrary.wiley.com/doi/abs/10.1111/add.13099
- 8Richter, K.P. & Ahluwalia, J.S. (2008, Oct 12). A Case for Addressing Cigarette Use in Methadone and Other Opioid Treatment Programs. Journal of Addictive Diseases. Retrieved from https://www.tandfonline.com/doi/abs/10.1300/J069v19n04_04
- Bandiera, F.C., Anteneh, B., Le, T., Delucchi, K., Guydish, J. (2015, March 25). Tobacco-Related Mortality among Persons with Mental Health and Substance Abuse Problems. PloS ONE. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4373726/pdf/pone.0120581.pdf
- ¹⁰Marynak K, VanFrank B, Tetlow S, et al. Tobacco Cessation Interventions and Smoke-Free Policies in Mental Health and Substance Abuse Treatment Facilities - United States, 2016. MMWR Morb Mortal Wkly Rep 2018;67:519-523. DOI: http://dx.doi.org/10.15585/mmwr.mm6718a3
- 11Yoon, J.H., Lane, S.D., Weaver, M.F. (2015, September 16). Opioid Analgesics and Nicotine: More Than Blowing Smoke. Journal of Pain & Palliative Care Pharmacotherapy. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/26375198
- ¹²Kobus, A.M., Smith, D.H., Morasco, B.J., et al. (2013, November 1). Correlates of Higher Dose Opioid Medication Use for Low Back Pain in Primary Care. The Journal of Pain. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3641146/pdf/nihms417423.pdf
- 13 Yoon, J.H., Lane, S.D., Weaver, M.F. (2015, September 16). Opioid Analgesics and Nicotine: More Than Blowing Smoke. Journal of Pain & Palliative Care Pharmacotherapy. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/26375198
- ¹⁴Ditre, J.W., Brandon, T.H., Zale, E.L., Meagher, M.M. (2011, November 1). Pain, Nicotine, and Smoking: Research Findings and Mechanistic Considerations. Psychological Bulletin. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3202023/pdf/nihms324174.pdf
- ¹⁵Centers for Disease Control and Prevention. (2018, May 11). Tobacco Cessation Interventions and Smoke-Free Policies in Mental Health and Substance Abuse Treatment Facilities- United States, 2016. Retrieved from https://www.cdc.gov/mmwr/volumes/67/wr/mm6718a3.htm
- 16Skurtveit, S., Furu, K. Selmer, R., Handal, M., Tverdal, A. (2010, June 2). Nicotine Dependence Predicts Repeated Use of Prescribed Opioids. Prospective Population-Based Cohort Study. Annals of Epidemiology. Retrieved from https://www.fhi.no/globalassets/dokumenterfiler/moba/pdf/nicotinedependence-predicts-repeated-use-of-prescribed-opioids.-prospective-population-based-cohort-study-pdf.pdf
- ¹⁷Prochaska, J.J., Das, S., Young-Wolff, K.C. (2017, March 20). Smoking, Mental Illness, and Public Health. Annu Rev Public Health. Retrieved from https:// www.ncbi.nlm.nih.gov/pubmed/27992725
- 18 Mannelli P, Wu, L.., Peindl, K.S., Gorelick, D.A. (2013, April 9). Smoking and Opioid Detoxification: Behavioral Changes and Response to Treatment. Nicotine Tob Res. Retrieved from https://academic.oup.com/ntr/article-abstract/15/10/1705/1182054
- ¹⁹Pakhale, S., Kaur, T., Charron, C., et al. (2018, January 25). Management and Point-of-Care for Tobacco Dependence (PROMPT): a feasibility mixed methods community-based participatory action research project in Ottowa, Canada. (p7). BMJ Open. Retrieved from http://bmjopen.bmj.com/content/ bmjopen/8/1/e018416.full.pdf
- ²⁰Marynak K, VanFrank B, Tetlow S, et al. Tobacco Cessation Interventions and Smoke-Free Policies in Mental Health and Substance Abuse Treatment Facilities - United States, 2016. MMWR Morb Mortal Wkly Rep 2018;67:519-523. DOI: http://dx.doi.org/10.15585/mmwr.mm6718a3
- ²¹Compton, W. (2017, December 28) The Need to Incorporate Smoking Cessation into Behavioral Health Treatment. Am J Addict. Retrieved from https:// www.ncbi.nlm.nih.gov/pubmed/29283480
- ²²Martinez, C., Guydish, J., Le, T., Tajima, B., Passalacqua, E. (2015, January 1), Predictors of quit attempts among smokers enrolled in substance abuse treatment. Addictive Behaviors. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4250286/pdf/nihms-624510.pdf
- ²³Nahvi, S., Richter, K., Li, X., Modali, L., Arnsten, J. (2006, Nov). Cigarette Smoking and Interest in Quitting in Methadone Maintenance Patients. Addictive Behaviors. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/16473476
- ²⁴Richter, K.P., Gibson, C.A., Ahluwalia, J.S., & Schmelze, K.H. (2001, Feb). Tobacco Use and Quit Attempts Among Methadone Maintenance Clients. Am J Public Health. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1446533/
- ²⁵Compton, W. (2017, December 28) The Need to Incorporate Smoking Cessation into Behavioral Health Treatment. Am J Addict. Retrieved from https:// www.ncbi.nlm.nih.gov/pubmed/29283480 ²⁶lbid
- ²⁷Martinez, C., Guydish, J., Le, T., Tajima, B., Passalacqua, E. (2015, January 1), Predictors of quit attempts among smokers enrolled in substance abuse treatment. Addictive Behaviors. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4250286/pdf/nihms-624510.pdf
- ²⁸Substance Abuse and Mental Health Service Administration. (2017). National Survey of Substance Abuse Treatment Services (N-SSATS): 2016. Data on Substance Abuse Treatment Facilities. Substance Abuse and Mental Health Services Administration. Retrieved from https://www.dasis.samhsa.gov/ dasis2/nssats/2016_nssats_rpt.pdf
- ²⁹Centers for Disease Control and Prevention. (2018, May 11). Tobacco Cessation Interventions and Smoke-Free Policies in Mental Health and Substance Abuse Treatment Facilities- United States, 2016. Retrieved from https://www.cdc.gov/mmwr/volumes/67/wr/mm6718a3.htm
- ³⁰Ziedonis, D.M., Guydish, J., Williams, J., Steinberg, M., Foulds, J. (2006, February). Alcohol Research & Health. Retrieved from https://pubs.niaaa.nih.gov/ publications/arh293/228-235.pdf
- ³¹Abraham, A.J., Andrews, C.M., Grogan, C.M., et al. (2017, January). The Affordable Care Act Transformation of Substance Use Disorder Treatment. American Journal of Public Health. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5308192/pdf/AJPH.2016.303558.pdf



32Kaiser Family Foundation. (2018, February 27). Medicaid's Role in Addressing the Opioid Epidemic. Kaiser Family Foundation. Retrieved from https:// www.kff.org/infographic/medicaids-role-in-addressing-opioid-epidemic/

33 Tobacco Use and Dependence Guideline Panel. (2008, May). Treating Tobacco Use and Dependence: 2008 Update. U.S. Department of Health and Human Services. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK63945/

³⁴Sharp, J.R., Schwartz, S., Nightingale, T., Novak, S. (2003, August). Targeting Nicotine Addiction in a Substance Abuse Program. Science & Practice Perspectives. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2851041/pdf/spp-02-1-33.pdf

35Pakhale, S., Kaur, T., Charron, C., et al. (2018, January 25). Management and Point-of-Care for Tobacco Dependence (PROMPT): a feasibility mixed methods community-based participatory action research project in Ottowa, Canada. BMJ Open. Retrieved from http://bmjopen.bmj.com/content/ bmjopen/8/1/e018416.full.pdf

³⁶McCullough, A., Fisher, M., Goldstein, A.O., et al. (2009, November-December). Smoking as a vital sign: prompts to ask and assess increase cessation counseling. The Journal of the American Board of Family Medicine. Retrieved from http://www.jabfm.org/content/22/6/625.full.pdf

³⁷Guydish, J., Yip, D., Le, T., Gubner, N., Delucchi, K., Roman, P. (2017, April 15). Smoking-related Outcomes and Associations with Tobacco-free Policy in Addiction Treatment, 2015-2016. Drug and Alcohol Dependence. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5600495/

³⁸The Association for Addiction Professionals, National Certificate in Tobacco Treatment Practice (NCTTP), Retrieved from https://www.naadac.org/ **NCTTP**

³⁹Krauth, D., Apollonio, D.E. (2015, October 22). Overview of state policies requiring smoking cessation therapy in psychiatric hospitals and drug abuse treatment centers. Tobacco Induced Diseases. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4618524/



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