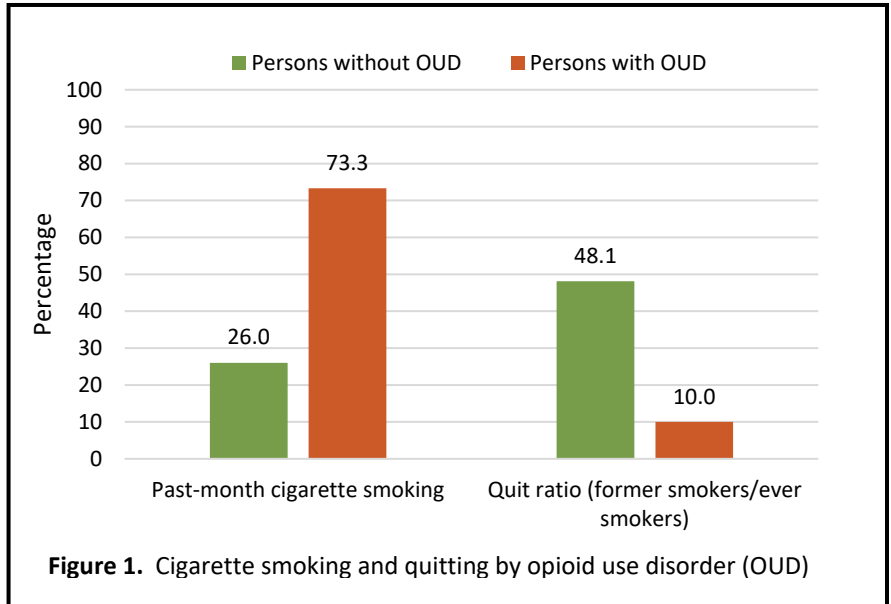




Tobacco and Opioid Use

- Persons with opioid use disorder (OUD) have nearly three-fold higher prevalence of past-month cigarette smoking and nearly five-fold lower success quitting smoking than those without (Figure 1).¹
- Opioid-dependent smokers also have higher nicotine dependence than non-opioid dependent smokers.²
- Interactions between nicotine and opioids in the brain may facilitate their co-use.³ Cigarette smoking has been shown to increase the likelihood of relapse and impede long-term abstinence in adults with substance use disorders.⁴
- Tobacco use contributes to increased morbidity and mortality, particularly from cardiovascular disease, the second leading cause of death in individuals with opioid use disorder (OUD), following drug or substance-related deaths.⁵ This may partially explain the four-fold higher mortality rate of opioid-using cigarette smokers compared to opioid-using non-smokers.⁶
- The prevalence of cigarette use is higher in rural compared with non-rural adults,⁷ underscoring potentially higher prevalence of concurrent tobacco and opioid use in rural communities.



Importance of tobacco cessation in persons with opioid use disorder

- Population data document lower quit ratios for persons who smoke with opioid misuse (18%) and OUD (10%) compared to those with no opioid use disorder (48%).¹
- Nicotine replacement therapy (NRT) has been proven to be effective for cessation among persons in methadone-maintenance treatment for opioid use disorder⁸ and early data suggest that e-cigarettes may reduce cigarette smoking in this population as well.^{9,10}
- Providing a brief supply of free NRT to all cigarette smokers, regardless of interest in cessation, can increase quit attempts in cigarette smokers unmotivated to quit.¹¹ Delivery of Tobacco Toolkits, like UVM CORA's, to all eligible smokers through routine health care visits increases ever use of cessation medications, including purchase of NRT, and smoking cessation at 1, 3, and 6-month follow-up.^{12,13} These efforts are particularly important for rural cigarette smokers, who experience cost and other access barriers to tobacco treatment.¹⁴

"Factsheet on Tobacco and Opioid Use Disorder" was created by UVM CORA as a resource for our Tobacco Toolkits. UVM CORA has trained educators available to support providers in the use of Nicotine Replacement Therapies for tobacco reduction or cessation efforts in persons with opioid use disorder. Providers can reach out to uvmcora@uvm.edu for consultation free of charge.

References

1. Parker MA, Weinberger AH, Villanti AC. Quit ratios for cigarette smoking among individuals with opioid misuse and opioid use disorder in the United States. *Drug Alcohol Depend.* 2020;214:108164.
2. Parker MA, Streck JM, Sigmon SC. Associations between opioid and nicotine dependence in nationally representative samples of United States adult daily smokers. *Drug Alcohol Depend.* 2018;186:167-170.
3. Lichenstein SD, Zakiniaez Y, Yip SW, Garrison KA. Mechanisms and Clinical Features of Co-occurring Opioid and Nicotine Use. *Curr Addict Rep.* 2019;6(2):114-125.
4. Weinberger AH, Platt J, Esan H, Galea S, Erlich D, Goodwin RD. Cigarette Smoking Is Associated With Increased Risk of Substance Use Disorder Relapse: A Nationally Representative, Prospective Longitudinal Investigation. *J Clin Psychiatry.* 2017;78(2):e152-e160.
5. Hser YI, Mooney LJ, Saxon AJ, et al. High Mortality Among Patients With Opioid Use Disorder in a Large Healthcare System. *Journal of addiction medicine.* 2017;11(4):315-319.
6. Hser YI, McCarthy WJ, Anglin MD. Tobacco use as a distal predictor of mortality among long-term narcotics addicts. *Prev Med.* 1994;23(1):61-69.
7. Rural Health Information Hub. Substance Use and Misuse in Rural Areas. <https://www.ruralhealthinfo.org/topics/substance-use>. Published 2020. Updated December 9. Accessed July 29, 2021.
8. Yee A, Hoong MC, Joyce YC, Loh HS. Smoking Cessation Among Methadone-Maintained Patients: A Meta-Analysis. *Subst Use Misuse.* 2018;53(2):276-285.
9. Baldassarri SR, Fiellin DA, Savage ME, et al. Electronic cigarette and tobacco use in individuals entering methadone or buprenorphine treatment. *Drug Alcohol Depend.* 2019;197:37-41.
10. Stein MD, Caviness C, Grimone K, Audet D, Anderson BJ, Bailey GL. An Open Trial of Electronic Cigarettes for Smoking Cessation Among Methadone-Maintained Smokers. *Nicotine Tob Res.* 2016;18(5):1157-1162.
11. Carpenter MJ, Hughes JR, Gray KM, Wahlquist AE, Saladin ME, Alberg AJ. Nicotine therapy sampling to induce quit attempts among smokers unmotivated to quit: a randomized clinical trial. *Arch Intern Med.* 2011;171(21):1901-1907.
12. Carpenter MJ, Wahlquist AE, Dahne J, et al. Nicotine replacement therapy sampling for smoking cessation within primary care: results from a pragmatic cluster randomized clinical trial. *Addiction.* 2020;115(7):1358-1367.
13. Dahne J, Wahlquist AE, Boatright AS, et al. Nicotine replacement therapy sampling via primary care: Methods from a pragmatic cluster randomized clinical trial. *Contemporary clinical trials.* 2018;72:1-7.
14. Talbot JA, Williamson ME, Pearson K, et al. Advancing Tobacco Prevention and Control in Rural America. National Network of Public Health Institutes. <https://nnphi.org/wp-content/uploads/2019/02/AdvancingTobaccoPreventionControlRuralAmerica.pdf>. Published 2019. Accessed February 4, 2021.