

# Tobacco Use and Suicide Risk

## Overview

As rates of mental health challenges increase in the United States, reducing risk factors for suicide remains a public health concern. Tobacco use is an important factor associated with increased suicide risk. Compared to those who do not use tobacco, those who do have a 2-4 times greater risk of suicidal ideation, planning, attempt, or death.<sup>1,2</sup> Given the important risk-relationship between tobacco use and suicide, supporting tobacco cessation can enhance mental health by reducing suicide risk.

## Tobacco Related Morbidity & Mortality

### **Tobacco use remains a significant risk factor for suicidal behaviors.**

- Tobacco use dependence is associated with suicide attempts, even when accounting for sociodemographic factors, mental health disorders, and comorbid diseases.<sup>3</sup>
- Individuals who begin using tobacco at a young age and who consume a large quantity of cigarettes have an increased risk for suicide later in life compared to those who never began.<sup>4,5</sup>
- Relapsing after stopping tobacco use increases the risk of attempting suicide.<sup>6</sup>
- Individuals living with mental and behavioral health challenges who use tobacco die by suicide more often than those who do not use tobacco.<sup>7</sup>

## Tobacco Use & Mental Health

### **Stopping tobacco use improves mental and behavioral health.**

- Tobacco use can be safely treated while receiving other behavioral health treatment under the supervision of a healthcare provider. In fact, evidence-based tobacco treatment is associated with a reduction in depression and suicide.<sup>8,9</sup>
- Stopping tobacco use can reduce suicide by improving mental illness symptoms, such as decreasing anxiety, depression, and stress.<sup>10</sup>
- Tobacco use is associated with greater substance use which is a risk factor for suicide; whereas, tobacco treatment supports substance use recovery.<sup>11</sup>

## Tobacco Use & Recovery

### **Tobacco use has financial and social burdens, impeding overall recovery.**

- Financial crisis is a major risk factor for suicide.<sup>12</sup> The cost of cigarettes varies by state due to taxes but may contribute to a significant portion of individual expenses. For example, it costs \$200.26 per month on average to purchase a pack a day in Kentucky (\$5.36 per pack with a tax of \$1.10).<sup>13, 14</sup>
- Tobacco users may have difficulty acquiring housing due to smoke-free policies in all public housing.<sup>15</sup> Housing instability may further exacerbate suicide risk by worsening existing life stressors and reducing accessibility to treatment.<sup>16, 17</sup>

## Key Takeaways

- Tobacco use is associated with higher rates of suicidal thoughts and attempts.
- Tobacco use cessation improves mental and behavioral health outcomes.
- Tobacco use hinders recovery by lowering expendable income and reducing opportunities for affordable housing.

If you or someone you know is experiencing a mental health crisis, please call the National Suicide Prevention and Mental Health Crisis Hotline: **Dial 988**

For more information, please contact Dr. Zim Okoli at (859) 323-6606 or [ctokoll@uky.edu](mailto:ctokoll@uky.edu). More resources are available on BH WELL's website at [www.uky.edu/bhwell](http://www.uky.edu/bhwell).

This work was supported, in part, by the Cabinet for Health and Family Services' Department for Public Health Tobacco Prevention and Cessation Program under Agreement titled "Enhancing Tobacco Dependence Treatment in Community Mental Health Centers."

## References

1. Lange, S., Koyanagi, A., Rehm, J., Roerecke, M., & Carvalho, A. F. (2020). Association of Tobacco use and Exposure to secondhand smoke with suicide attempts among adolescents: findings from 33 countries. *Nicotine and tobacco research*, 22(8), 1322-1329
2. Poorolajal, J., & Darvishi, N. (2016). Smoking and suicide: a meta-analysis. *PloS One*, 11(7), e0156348
3. Yaworski, D., Robinson, J., Sareen, J., & Bolton, J. M. (2011). The relation between nicotine dependence and suicide attempts in the general population. *Canadian journal of psychiatry. Revue Canadienne de psychiatrie*, 56(3), 161-170.  
<https://doi.org/10.1177/070674371105600306>
4. Dasagi, M., Mantey, D. S., Harrell, M. B., & Wilkinson, A. V. (2021). Self-reported history of intensity of smoking is associated with risk factors for suicide among high school students. *PloS One*, 16(5), e0251099
5. Korhonen, T., Sihvola, E., Latvala, A., Dick, D. M., Pulkkinen, L., Nurnberger, J., ... & Kaprio, J. (2018). Early-onset tobacco use and suicide-related behavior—A prospective study from adolescence to young adulthood. *Addictive behaviors*, 79, 32-38
6. Berlin, I., Hakes, J. K., Hu, M. C., & Covey, L. S. (2015). Tobacco use and suicide attempt: longitudinal analysis with retrospective reports. *PloS One*, 10(4), e0122607
7. Smoking Cessation Leadership Center. Fact Sheet: The Tobacco Epidemic Among People With Behavioral Health Disordersexternal icon. San Francisco: Smoking Cessation Leadership Center, University of California, 2015 [accessed 2022 May 2017]
8. Moore, T. J., Furberg, C. D., Glenmullen, J., Maltsberger, J. T., & Singh, S. (2011). Suicidal behavior and depression in smoking cessation treatments. *PloS One*, 6(11), e27016
9. Sankaranarayanan, A., Clark, V., Baker, A., Palazzi, K., Lewin, T. J., Richmond, R., ... & Williams, J. M. (2016). Reducing smoking reduces suicidality among individuals with psychosis: Complementary outcomes from a Healthy Lifestyles intervention study. *Psychiatry research*, 243, 407-412.
10. Taylor, G. M., Lindson, N., Farley, A., Leinberger-Jabari, A., Sawyer, K., te Water Naudé, R., ... & Aveyard, P. (2021). Smoking cessation for improving mental health. *Cochrane Database of Systematic Reviews*, (3).
11. McKelvey, K., Thrul, J., & Ramo, D. (2017). Impact of quitting smoking and smoking cessation treatment on substance use outcomes: An updated and narrative review. *Addictive behaviors*, 65, 161-170.
12. de la Garza, Á. G., Blanco, C., Olfson, M., & Wall, M. M. (2021). Identification of suicide attempt risk factors in a national US survey using machine learning. *JAMA psychiatry*, 78(4), 398-406.
13. Centers for Disease Control and Prevention (2022). Table for STATE System Excise Taxes on Cigarettes Interactive Map. <https://chronicdata.cdc.gov/Legislation/Table-for-STATE-System-Excise-Taxes-on-Cigarettes-/g4va-qmeq/data>
14. Sales Tax Handbook (2022). Kentucky: Tobacco Excise Taxes. <https://www.salestaxhandbook.com/kentucky/tobacco>
15. U.S. Department of Housing and Urban Development (2017). Smoke-Free Public Housing. <https://www.hud.gov/smokefreepublichousing>
16. Padgett, D. K. (2020). Homelessness, housing instability and mental health: making the connections. *BJPsych bulletin*, 44(5), 197-201.
17. Martínez-Alés, G., Jiang, T., Keyes, K. M., & Gradus, J. L. (2021). The recent rise of suicide mortality in the United States. *Annual review of public health*, 43.