NCPC
UC MERCED
Nicotine & Cannabis
Policy Center

CORONAVIRUS (COVID-19) REPORT AUGUST 2020

INCREASED RISKS AND CRISES IN TRUST: THE INTERSECTION FOR SMOKERS, VAPERS AND CANNABIS USERS IN CALIFORNIA DURING THE COVID-19 PANDEMIC

Gilda Zarate-Gonzalez, Imrinder Toor, Rudiel Fabian

NOTE: The Nicotine and Cannabis Policy Center (NCPC) at the University of California, Merced provides timely information to assist policy makers at the state and local level to make evidence-based decisions regarding nicotine and cannabis policies. The information in this brief is based on our own research as well as synthases of the most recent evidence.

CURRENT RESEARCH:

This research is based on a survey conducted by the Rapid Response Core of UC Merced's Nicotine and Cannabis Policy Center (NCPC). The results suggest that when compared with nonsmokers, cigarette smokers, vapers, and cannabis users were more likely to be low-income, experience income loss due to the pandemic, and be more worried about losing their health insurance or being uninsured. They were also less likely to report wearing a face mask in public or keep 6-feet (ft) of physical distance from others. Distrust in government was a significant factor for vapers and cannabis users, and all three groups expressed more hesitancy about getting a vaccination to COVID-19 when available. This suggests that Public Health, Behavioral and Mental Health Departments, Social Services agencies, and community service organizations should consider targeting messages to smokers, vapers, and cannabis users regarding the importance of adhering to COVID-19 protections.

CORRESPONDENCE:

Marisela Yepez, Research Project Manager
Email: myepez5@ucmerced.edu
Website: https://ncpc.ucmerced.edu/ncpc-cores/rapid-response-core

BACKGROUND:

As of August 2020, 20.4 million cases of COVID-19 have been reported around the world [1] 5.2 million of those cases have been reported in the United States, and 595,063 cases have been reported in California alone.[2] The SAR-CoV-2 virus can spread person to person through small droplets that are expelled from the mouth and nose.[3] The virus can attack and damage human organs through two major events: direct viral attacks against target organs and abnormal immune responses and inflammation.[4] Those with underlying conditions such as hypertension, diabetes, cancer, or heart and lung problems are at higher risk for developing serious illness from exposure to SARS-CoV-2.[5] These diseases are highly associated with tobacco use, smoking and vaping. Cannabis smokers are also at risk, due to being susceptible to chronic obstructive pulmonary disease (COPD), which could cause severe complications of SARS-CoV-2 and lead to higher fatality rate.[6–8]

PUBLIC HEALTH KNOWLEDGE:

Smoking is known to weaken the immune system and hinder its ability to respond to respiratory infections, which increases smokers' vulnerability to diseases that affect the lungs or airways.[9] Smoking also affects lung function, decreasing ventilation and possibly leading to conditions such as COPD.[10] There is evidence that 50% of smokers will eventually develop COPD at some point in their lifetime.[11]

CORONAVIRUS (COVID-19) REPORT AUGUST 2020

COPD has been shown to lead to increased severity in symptoms and higher mortality rates due to COVID-19-related infections.[12] Current smokers have been shown to be 1.45 times more likely to have severe complications from COVID-19 than nonsmokers or former smokers.[12] An immunocompromised state and decreased lung function, both of which are health outcomes of smoking, are also risk factors for severe cases of COVID-19.[13] There is no current research assessing the novel health and social risks of COVID-19 amongst smokers, vapers or cannabis users in California.

CURRENT RESEARCH:

The Rapid Response Core of UC Merced's Nicotine and Cannabis Policy Center (NCPC) surveyed 823 adults residing in California's San Joaquin Valley (33%), Los Angeles (34%), and Bay Area (33%) regions during June 2020. The mean age of participants was 42 (SD=17), 52% were female, 47% male, and 1% indicated non-binary or other sex. Our analysis identifies factors and behaviors that are associated with COVID-19 and that would affect the risk of cigarette smokers, vapers and cannabis users. Results indicate that regional differences are significant for cigarette smokers (p=.002) and cannabis users (p=.006), with the San Joaquin Valley (SJV) having greater number of smokers, vapers and cannabis users compared to other regions (see Table 1).

TABLE 1. SURVEY PARTICIPANTS BY SMOKING GROUP AND REGION

	CIGARETTE SMOKERS	VAPERS	CANNABIS USERS
SJV	19.0%	13.7%	18.5%
LA	11.7%	10.8%	17.7%
BAY AREA	8.0%	7.1%	8.8%

Compared to nonsmokers, cigarette smokers (mean age=28), vapers (mean age=23) and cannabis users (mean age=30) are significantly younger. We found significant association for all three (3) groups with being low-income, having experienced income loss due to the pandemic, and increased worry to lose their health insurance or being uninsured. All smoking groups are significantly less likely to wear a face mask in public, and less likely to keep 6-ft of physical distance from others. Working in a high-risk occupation that disproportionately exposes them to COVID-19 was a significant factor for cigarette smokers and vapers. Distrust in government was a significant factor for vapers and cannabis users as well. Remarkably, our findings revealed that vaccination hesitancy to an eventual COVID-19 immunization was significantly associated to all groups of smokers in our study.

Our research also assessed the relationship between relevant risk factors and each group's smoking behavior. Hence, cigarette smokers were 2.1 times less likely to wear a face mask and 2.4 times less likely to maintain 6-ft of distance with others in public. Vapers and cannabis users were also 3.1 times and 2.9 times less likely to maintain 6-ft of physical distance with others correspondingly. Vapers and cigarette smokers were more likely to express worry to losing their health insurance or being uninsured at 4.5 and 3.8 times. Financial distress was found to be a pivotal factor in our study, our results underlined that vapers were 3.5 times more likely to have lost income due to COVID-19, cannabis users 2.6 times more likely, and cigarette smokers were 2.2 more likely. Also, we examined the relationship between trust and smoking behaviors, our study found that cannabis users reported the lowest level of confidence and were 2.7 times more likely to distrust the information provided by the government.

CORONAVIRUS (COVID-19) REPORT AUGUST 2020

IMPLICATIONS FOR POLICY AND PRACTICE:

Understanding existing and emergent health risks and beliefs of high-risk groups, such as smokers and cannabis users, is particularly significant in the current pandemic. This evidence-based approach may help decision-makers prioritize vulnerable groups and allocate appropriate and equitable resources to mitigate heighten risks. Per our findings, the California's SJV region is bearing the highest burden of smoking, vaping and cannabis use combined with socioeconomic factors, such as financial distress, which further complicate our regional perspective. In the juncture of a highly contagious novel SAR-CoV-2 virus which is yet to be mitigated let alone controlled, revamping tobacco and cannabis outreach to include a framework of testing priority, prevention and social distancing, underscoring younger groups, are urgent strategies. Expanding education to health care providers and communities of the increased risks that COVID-19 represent for people who smoke, vape and/or use marijuana and include nontraditional allies in reaching these high-risk groups. Sustaining health insurance membership, regardless of type of insurance, and enrolling the currently uninsured may work well to increase the urgency for tobacco cessation and substance abuse treatment. Attentive efforts to reducing acute financial distress during the pandemic is an integral part of any public health strategy.

One of our main findings is vaccination hesitancy to a future COVID-19 immunization from smokers, vapers and cannabis users, this conclusion surprised all our researchers. Aiming at actively reducing risks, interrupting COVID-19 transmission, and laying the foundation for a favorable reception of new therapeutics, regional leaders should utilize Strategic Advisory Group of Experts[14] (SAGE) that could swiftly devise evidence-based, focused, and socially responsive health messages, policy and programs that distinguish the characteristics unique to the Valley and leverage joint resources. The suggested SAGE group may present a unified alliance that builds or restores trust and guarantees equitable and effective access to curative innovations.

.

CORONAVIRUS (COVID-19) REPORT AUGUST 2020

REFERENCES

1. WHO Coronavirus Disease (COVID-19) Dashboard. (n.d.). Retrieved August 13, 2020, from https://covid19.who.int/?gclid=EAIaIQobChMI-LHei9-Y6wIVEh-tBh3_KApSEAAYASAAEgKkJfD_BwE
2. Miller, S., & Wu, J. (2020, August 11). Coronavirus in the U.S.: Map of how many cases have been confirmed across the country, by state. Retrieved August 13, 2020, from https://www.nbcnews.com/health/health-news/coronavirus-u-s-map-where-virus-has-been-confirmed-across-n1124546
3. Q&A on coronaviruses (COVID-19). (n.d.). Retrieved August 13, 2020, from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-coronaviruses
4. Cao, W.; Li, T. COVID-19: Towards understanding of pathogenesis. Cell Res. 2020, 30, 367–369.
5. Zheng, Z., Peng, F., Xu, B., Zhao, J., Liu, H., Peng, J., Li, Q., Jiang, C., Zhou, Y., Liu, S., Ye, C., Zhang, P., Xing, Y., Guo, H., & Tang, W. (2020). Risk factors of critical & mortal COVID-19 cases: A systematic literature review and meta-analysis. The Journal of infection, 81(2), e16–e25. https://doi.org/10.1016/j.jinf.2020.04.021
6. Wu, Z.; McGoogan, J.M. Characteristics of and Important Lessons from the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. JAMA 2020.
7. Wei, Y.; Shah, R. Substance Use Disorder in the COVID-19 Pandemic: A Systematic Review of Vulnerabilities and Complications. Pharmaceuticals 2020, 13, 155.
8. Alqahtani, J.S.; Oyelade, T.; Aldhahir, A.M.; Alghamdi, S.M.; Almehmadi, M.; Alqahtani, A.S.; Quaderi, S.; Mandal, S.; Hurst, J.R. Prevalence, Severity and Mortality associated with COPD and Smoking in patients with COVID-19: A Rapid Systematic Review and Meta-Analysis. PLoS ONE, 2020 15, e0233147.
9. Qiu, F., Liang, C. L., Liu, H., Zeng, Y. Q., Hou, S., Huang, S., Lai, X., & Dai, Z. (2017). Impacts of cigarette smoking on immune responsiveness: Up and down or upside down?. Oncotarget, 8(1), 268–284. https://doi.org/10.18632/oncotarget.13613
10. Zhou, Z., Chen, P., & Peng, H. (2016). Are healthy smokers really healthy?. Tobacco induced diseases, 14, 35. https://doi.org/10.1186/s12971-016-0101-z
11. Lundbäck, B., Lindberg, A., Lindström, M., Rönmark, E., Jonsson, A. C., Jönsson, E., Larsson, L. G., Andersson, S., Sandström, T., Larsson, K., & Obstructive Lung Disease in Northern Sweden Studies (2003). Not 15 but 50% of smokers develop COPD?–Report from the Obstructive Lung Disease in Northern Sweden Studies. Respiratory medicine, 97(2), 115–122. https://doi.org/10.1053/rmed.2003.1446
12. Alqahtani, J. S., Oyelade, T., Aldhahir, A. M., Alghamdi, S. M., Almehmadi, M., Alqahtani, A. S., Hurst, J. R. (2020). Prevalence, severity and mortality associated with COPD and smoking in patients with COVID-19: A rapid systematic review and meta-analysis. PloS One, 15(5), e0233147. doi:10.1371/journal.pone.0233147 [doi]
13. Certain Medical Conditions and Risk for Severe COVID-19 Illness. (n.d.). Retrieved August 13, 2020, from https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html
14. The National Academies of Science, Engineering and Medicine Framework for Equitable Allocation of Vaccine for the Novel Coronavirus: https://www.nationalacademies.org/our-work/a-framework-for-equitable-allocation-of-vaccine-for-the-novel-coronavirus.