

# Tobacco and vaping in COVID-19

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## Abstract

Health crises have become a popular topic of discussion. In the wave of the ongoing pandemic, experts have suggested the role of vaping and other tobacco product use exemplifying the vulnerability of the population to contract the COVID-19. We discuss some of the events that led up to these conclusions and also offer a unique insight into another form of tobacco use that is potentially propagating its spread especially in the South Asian region – chewed tobacco. Both of these have been a perennial issue that head and neck cancer surgeons have been dealing with. Governments and Head and Neck cancer care providers now have an opportunity to deal with a common enemy in the midst of this pandemic.

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## Abstract

Health crises have become a popular topic of discussion. In the wave of the ongoing pandemic, experts have suggested the role of vaping and other tobacco product use exemplifying the vulnerability of the population to contract the COVID-19. We discuss some of the events that led up to these conclusions and also offer a unique insight into another form of tobacco use that is potentially propagating its spread especially in the South Asian region – chewed tobacco. Both of these have been a perennial issue that head and neck cancer surgeons have been dealing with. Governments and Head and Neck cancer care providers now have an opportunity to deal with a common enemy in the midst of this pandemic.

## Commentary

In these anxious times most people resort to unhealthy, self soothing habits from a bag of potato chips to binging chocolates. But fictitious “stress busters” known to cause head neck cancers have been identified by experts that are making populations vulnerable to contract the severe acute respiratory syndrome related-coronavirus-2 (SARS-CoV-2) infection – tobacco use and vaping. Since the novel coronavirus attacks the lungs, it would be logical for most users to taper, or better stop, the use of such products and not escalate them. (1) Yet the youth continues to use these devices finding ways to circumvent laws and without realizing its implication on the larger society. (2)

The initial reputation of Electronic Nicotine Delivery System (ENDS), or more colloquially called “vaping”, of being harmless began to change in mid 2019, when the reports of mysterious and life-threatening lung injuries related to vaping began to emerge across the globe.(3) The terrifying part was not the lack of diagnosis, etiology or treatment of the so-called EVALI (e-cigarette, or vaping, product use associated lung injury) but the demographic of the patients presenting these symptoms. The Center for Disease Control (CDC) reported that a typical EVALI patient was a 18-24 year-old male with a history of e-cigarette use.(4) This profile comprised of nearly 5 million middle and high school American students who had used e-cigarettes in the past 30 days, including 10.5% of middle school students and 27.5% of high school students.(4) After realizing an alarming 78% increase in e-cigarette use among high school students in a single year, the U.S. Surgeon General called the use of ENDS an “epidemic”, issuing a call for action against the use of e-cigarettes.(5) Emergency room visits started increasing in August 2019 and peaked in September with mostly young men and boys. In a matter of about two months, the rate of hospital admissions related to EVALI skyrocketed by more than ten times with an unknown number of non-hospitalized cases out there. To add to this, the death toll also started to rise with reports emerging from across ten states.(4,6) Today EVALI remains a diagnosis of exclusion because no specific test or marker exists for its diagnosis.

A similar rampant development is now plaguing our planet with COVID-19 infecting more than a 180 countries – nearly two million confirmed cases and causing over a million deaths. (7) The only difference is that this was not by choice! Similar to vaping and tobacco use, this ongoing “pandemic” has affected people across races and cultures in high-, middle- and low- income countries alike. The acute respiratory illness in a patient with a history of e-cigarette/vaping use and tetrahydrocannabinol (THC) exposure could be caused by a viral or EVALI etiology.(4) This cannot be distinguished from influenza and other virus related diseases by signs and symptoms at presentation. A Chinese study has also found that among infected patients, a history of smoking could increased the likelihood of progression of the pneumonia like symptoms by up to 14 times.(8) The WHO states that COVID-19 can spread through small droplets from the nose or mouth, which are spread when an infected person coughs or exhales. These droplets settle on objects around us and can survive for few hours or up to several days. Others can be infected by the Coronavirus by touching these objects or surfaces followed by touching their eyes, nose or mouth.(7) By virtue of their design, these products are brought to the mouth and face to inhale from repeatedly. At the same time, many users have increased cough or expectoration that is a recipe for increased transmission rates in society. To add to the numerous public health lawsuits against the vaping industry, they are now defending an allegation of willfully shipping over one million contaminated pods this year without notifying customers.(1)

Smokeless tobacco (SLT) could also be aiding the spread of and increasing the susceptibility towards COVID-19. The chewed form is often held in the mouth until the “kick” sets in, and then spat out along with saliva. This mixture is a harbinger of multiple pathogens, now including the SARS-CoV-2. With a historical precedence of imposing bans on public spitting to successfully curb the tuberculosis epidemic, many countries, provinces and cities continue such policies for controlling other communicable diseases.(9) Currently just eleven countries of the South East Asian region account for 90% of the global consumption of SLT, with a majority in India and Bangladesh.(10) SLT users often deface public places by spitting, commonly in low- and middle-income countries. What is worrisome is that 64% of people who live in sprawling tiny tenements and urban slums are in Asia. Places like these could become a petri dish for communicable infections like COVID-19, where SLT use is part of popular culture.

Just like other tobacco products, SLT use also is linked to a higher prevalence respiratory symptoms, heart disease and cancers, all of which are strongly associated with COVID-19.(11,12)

To strengthen containment measures, few state have issued advisories underscoring the exacerbation of the risk of spreading COVID-19, particularly among the young people that smoke and vape.(13) Health experts are urging administrations to ban all tobacco and vaping products.(14) States in India have also banned the manufacture and distribution of smokeless tobacco products during these trying times. Head and Neck cancer care providers and governments of the world now have an opportunity to deal with a common enemy in the midst of this pandemic- tobacco and vaping.(15)

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