

Deadly Partners--Tobacco and COVID-19

A call to action for governments

On 11 March 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a global pandemic as the novel coronavirus continued to rapidly spread worldwide. Although there remain many unknowns about the virus SARS-CoV-2 and COVID-19, the disease it causes, it is clear that people with pre-existing non-communicable diseases (NCDs) appear to be more vulnerable to becoming severely ill with, or die from, COVID-19. The tobacco epidemic is an entirely preventable and avoidable risk factor for a range of NCDs. Tobacco is also an important risk factor for tuberculosis (TB), the world's biggest infectious disease killer, and early evidence is showing the increased risk of serious outcomes of COVID-19 in people with TB. This paper presents important research evidence and news reports about COVID-19 and its association with NCDs, tobacco use, smoking and vaping, and also enlists some key actions to be taken urgently by governments.

Evidence showing the association of COVID-19 with tobacco smoking

- Studies from China show that the odds of progression toward serious illness were 14 times higher among people with a history of smoking compared to those who did not smoke¹ and experience worse outcomes as compared to non-smokers.² Another study in China documented that 58% of people with COVID-19 who were critically ill were men. It is theorised that this may be due to the fact that smoking prevalence among men in China is much higher than among women.³
- Recent evidence shows that smokers are more susceptible to severe symptoms if they contract COVID-19 compared to non-smokers. In a study published by the New England Journal of Medicine, smokers were 2.4 times more likely to have severe symptoms from COVID-19 compared to those who did not smoke. It suggests that tobacco use is associated with a poor evolution/poor prognosis of COVID-19 and more serious results, including admission to intensive care units, use of mechanical ventilation, and death.⁴
- SARS-CoV-2 primarily affects the respiratory system, causing mild to severe respiratory damage.⁵ The fact that smoking is a risk factor for many lower respiratory tract infection⁶ is further evidence of this important link between smoking-related harms and COVID-19.
- The relation between COVID-19 and cardiovascular health is important because tobacco use and exposure to second-hand smoke are major causes of cardiovascular diseases globally. A weaker cardiovascular system among persons with COVID-19 with a history of tobacco use could make such people susceptible to severe symptoms, thereby increasing the risk of death.⁷
- Smokers are likely to be more vulnerable to COVID-19 as the act of smoking means that fingers (and possibly contaminated cigarettes) are in contact with the lips, which increases the possibility of transmission of the virus from hand to mouth.⁸
- The European Centre for Disease Prevention and Control recently suggested that possible preventable determinants of severe COVID-19, such as smoking and certain medications should be identified, as they may contribute to an increase in the number of severe cases, and thus impact hospital capacity.⁹

- La Asociación Latinoamericana de Tórax (ALAT), the International Union Against Tuberculosis and Lung Disease (The Union) and la Sociedad Española de Neumología y Cirugía Torácica (SEPAR) noted that smokers and users of inhaled substances, would have more risks factors in the COVID-19 pandemic; such risks are added to those already known caused by tobacco consumption. Therefore, smoking cessation becomes a relevant preventive measure to defend against SARS-CoV-2.¹⁰

Evidence showing the association of COVID-19 with using water pipes, shisha, chewing tobacco and vaping

- The use of water pipes, shisha, e-cigarettes, and heated tobacco products such as IQOS have not been unequivocally proven to be “safer” than combustible cigarettes in both the short- and long-term, as they all produce an aerosol that could cause damage to the lungs. What’s more, the use of these products is a risk for transmission of COVID-19 as the user exhalation could carry SARS-CoV-2.^{8,11,12}
- Up to 20% of persons hospitalized for COVID-19 in the United States (US) are between the ages of 20 and 44 years, and half of the people with COVID-19 in California are among younger adults aged 18 to 49 years. It has been theorized that the popularity of vaping might explain the increased incidence of COVID-19 among youth and young adults.¹³
- Spitting in public places could enhance the spread of COVID-19. According to Indian Council of Medical Research (ICMR), “Chewing or smokeless tobacco products (Gutkha, ‘Paan masala’ with tobacco, ‘Paan’ and other chewing tobacco products) and areca nut (supari) increase the production of saliva, followed by a very strong urge to spit. ICMR has urged people to refrain from consuming smokeless tobacco products and spitting in public places.¹⁴ The State Government of Uttar Pradesh in India has banned the sale of ‘paan masala’, in view of the raging pandemic.¹⁵
- COVID-19 can easily spread through indirect oral contact. Smoking products such as water pipes often involve the sharing of mouthpieces and hoses, which could facilitate the transmission of COVID-19 in communal and social settings.⁸ Passing lighters, vape pens and anything else around could spread the virus.

Evidence showing the association of COVID-19 with NCDs

- Tobacco smoking is a leading common risk factor for major NCDs that account for over 70% of untimely deaths globally. These NCDs include cardiovascular diseases (such as hypertension, persons who have had or are at risk for a heart attack, other heart diseases or stroke), diabetes, cancers, and chronic respiratory diseases. Reports from around the world show that people with NCDs are more likely to suffer severe COVID-19 with serious outcomes, including death.¹⁶
- The recent release of a report by the Instituto Superiore di Sanità (ISS) in Italy stated that respiratory failure was the most commonly observed complication in this sample (97.2% of cases), followed by acute kidney damage (27.8%), acute myocardial damage (10.8%) and superinfection (10.2%).¹⁷

- Research on 55,924 laboratory-confirmed persons with COVID-19 in China revealed a crude fatality ratio that was much higher among those with cardiovascular disease, diabetes, hypertension, chronic respiratory disease or cancer, compared to those with no pre-existing chronic medical conditions.⁵
- According to the Ministry of Health and Family Welfare, Government of India, 86% of deaths due to COVID-19 have exhibited comorbidity related to diabetes, chronic kidney issues, hypertension and heart problems.¹⁸

The tobacco industry and COVID-19

- Even in times of a public health emergency of international concern, the tobacco industry continues to spread its misinformation- through blog posts and social media - denying the link between smoking and COVID-19 to protect its markets.^{19,20,21}
- The industry is capitalising on the pandemic to improve its public relations by offering donations and partnerships to governments. At the same time, tobacco companies continue to aggressively market their products, which-in addition to causing eight million deaths each year- are exacerbating the COVID-19 crisis.²²
- When Italy had the largest burden of COVID-19 outside of China, tobacconists and vaping shops were left open along with essential services during lockdown due to lobbying by industry interests.²³

Call to action:

Tobacco smoking appears to be an important and entirely avoidable risk factor for a poorer prognosis in COVID-19. COVID-19 has not only severely constrained health systems but also could have a cascading impact on progress countries were making towards different goals and targets of the United Nations Sustainable Development Goals (SDGs). With the looming danger of economic recession, it becomes even more vital to avert the huge financial cost of tobacco use to the global economy. The urgency to prioritise stronger action on comprehensive tobacco control is mandatory for optimal response to contain the COVID-19 pandemic as well as to ensure the gains made on the SDGs are not lost. Therefore, governments must:

1. Run a mass media campaign through television, radio, and social media to amplify the following messages: smokers are at increased risk of complications of COVID-19 and smokers should quit now. Quitting tobacco smoking and vaping can help lower the risk of serious COVID-19 symptoms, reduce the risk of transmission and support the strength of the immune system.
2. Ensure adequate resources to support tobacco cessation programs, including quit lines, mobile messaging, and internet support etc. Such programs should be sufficiently staffed to meet the likely increased need to quit tobacco use from the public in light of lockdowns. [The Union](#) and [WHO](#) approaches can be applied.

3. Strengthen the implementation and enforcement of tobacco control policies, including 100% tobacco-free public places, workplaces, and public transportation. Complete tobacco-free environments are the only proven way to protect people from second-hand smoke exposure, which is linked to respiratory and cardiovascular conditions and increased vulnerability to serious COVID-19 symptoms and mortality.
4. Immediately establish, implement, and enforce a regulation to ban the sale and use of water pipes, shisha, electronic cigarettes, heated tobacco products (such as IQOS), and chewing tobacco. Banning water pipes and shisha would also help to discourage social gatherings that contribute to the spread of the virus.
5. Fully implement and enforce the [WHO FCTC](#) (Framework Convention on Tobacco Control) and [WHO MPOWER](#) measures, including raising taxes and prices on tobacco products, which is the most effective way to reduce tobacco use and to generate revenue to fund health systems and tobacco control programs.
6. Ensure that the smoking status of persons identified with COVID-19 is recorded and included in all data sets.
7. Prohibit tobacco industry donations and partnerships and fully implement and enforce [WHO's FCTC Article 5.3](#). Governments must reject pseudo-science funded by the tobacco industry and its allies and sale of tobacco and vaping must be banned during the COVID-19 pandemic.
8. Consider accelerating progress on [WHO FCTC Article 19](#) to advance work on the legal and financial liability of the tobacco industry for worsening the impact of COVID-19, in addition to the known damage caused by an entirely preventable epidemic of tobacco.
9. Ensure uninterrupted supply of medicines and healthcare services to people living with NCDs, including education and counselling on maintaining a healthy diet, avoiding alcohol, keeping physically active, safeguarding mental health, promoting cessation services to quit smoking, vaping and chewing tobacco.

References:

1. Liu W, Tao ZW, Wang L, Yuan ML, Liu K, Zhou L, Wei S, Deng Y, Liu J, Liu HG, Ming Y, Hu Y. Analysis of factors associated with disease outcomes in hospitalized patients with 2019 novel coronavirus disease. Chin Med J 2020;133:1032–1038. doi: 10.1097/CM9.0000000000000775. Available on https://journals.lww.com/cmj/Fulltext/2020/05050/Analysis_of_factors_associated_with_disease.5.aspx
2. Zhou F, Yu T, Ronghui D, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. Lancet; published online March 2020. DOI: 10.1016/S0140-6736(20)30566-3.
3. Hua Cai. March 2020. Sex difference and smoking predisposition in patients with COVID-19. The Lancet. Respiratory Medicine. Volume 2, Issue 4. Available on: [https://www.thelancet.com/journals/lanres/article/P1IIS2213-2600\(20\)30117-X/fulltext?fbclid=IwAR3UwqAqCwkRZag_aKCdX9HBDbVqqeWe8nT7xuP4VYzk41Dz3POi4QmGpE](https://www.thelancet.com/journals/lanres/article/P1IIS2213-2600(20)30117-X/fulltext?fbclid=IwAR3UwqAqCwkRZag_aKCdX9HBDbVqqeWe8nT7xuP4VYzk41Dz3POi4QmGpE)
4. Guan et al. Clinical Characteristics of Coronavirus Disease 2019 in China. The New England journal of medicine. published February 2020. DOI: 10.1056/NEJMoa2002032. Available on: <https://www.nejm.org/doi/full/10.1056/NEJMoa2002032>
5. World Health Organization, Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19), 14-20 February 2020., 2020.
6. U.S. Department of Health and Human Services, Centres for Disease Control and Prevention, National Centre for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, The health consequences of smoking: 50 years of progress - A report by the Surgeon General, Atlanta, 2014.

7. The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team, "The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) - China, 2020," China CDC Weekly, vol. 2, no. 8, 2020.
8. World Health Organization. Tobacco and waterpipe use increases the risk of suffering from COVID-19. 2020. <http://www.emro.who.int/fr/tfi/know-the-truth/tobacco-and-waterpipe-users-are-at-increased-risk-of-covid-19-infection.html>
9. Control ECfDPa. Rapid risk assessment: Coronavirus disease 2019 (COVID-19) pandemic: increased transmission in the EU/EEA and the UK – seventh update. European Centre for Disease Prevention and Control 2020.
10. Asociación Latinoamericana de Tórax (ALAT), Unión Internacional contra la Tuberculosis y Enfermedades Respiratorias (La Unión), Sociedad Española de Neumología y Cirugía Torácica (SEPAR). COVID-19: "Fumar en tiempos de COVID-19". Documento de Posición (DOCUMENT FOR HEALTH CARE PROVIDERS). April, 2020. Available online: <https://alatorax.org/es/covid-19/covid-19-fumar-en-tiempos-de-covid-19-documento-de-posicion>
11. Miyashita L, Suri R, Dearing E, Mudway I, Dove RE, Neill DR, Van Zyl-Smit R, Kadioglu A, Grigg J. E-cigarette vapour enhances pneumococcal adherence to airway epithelial cells. *The European respiratory journal* 2018; 51.
12. Mohammad Ebrahimi Kalan ZBT, Mehdi Fazlzadeh, Kenneth D Ward, Wasim Maziak. Waterpipe Tobacco Smoking: A Potential Conduit of COVID-19. *BMJ Tobacco Control* 2020.
13. John Maa. April 2020. Why Covid-19 might make you rethink your smoking habits. CNN OPINION. Available at: <https://edition.cnn.com/2020/04/06/opinions/smoking-vaping-covid-19-coronavirus-maa/index.html>
14. Indian Council of Medical Research (ICMR), Government of India. Available on: https://icmr.nic.in/sites/default/files/upload_documents/Appeal_to_the_General_Public.pdf
15. Business Standard. UP govt bans production, distribution of pan masala till further orders. Available on: https://www.business-standard.com/article/news-ani/up-govt-bans-production-distribution-of-pan-masala-till-further-orders-120032501112_1.html
16. World Health Organization. COVID-19 and NCDs. Information Note. 2019. Available online : <https://www.who.int/internal-publications-detail/covid-19-and-ncds>
17. Istituto Superiore di Sanità (ISS). March 2020. Report on the characteristics of patients who died positive to COVID-19 in Italy Available online: https://www.epicentro.iss.it/coronavirus/bollettino/Report-COVID-2019_17_marzo-v2.pdf
18. Press Information Bureau, Government of India. Available on: <https://pib.gov.in/PressReleaselframePage.aspx?PRID=1611676>
19. Hefler M, Gartner CE. The tobacco industry in the time of COVID-19: time to shut it down? *Tob Control* Epub ahead of print: 2020. doi:10.1136/tobaccocontrol-2020-055807. Available online: <https://tobaccocontrol.bmj.com/content/tobaccocontrol/early/2020/04/06/tobaccocontrol-2020-055807.full.pdf>
20. Metronome.Ge. 2020. სამეცნიერო კვლევა - კორონავირუსი უმეტესწილად არამწეველებს აზიანებს - Metronome.Ge. [online] Available at: <https://metronome.ge/story/253596> [Accessed 15 April 2020]
21. 2020. Available at: <<https://mobile.twitter.com/ChaunceyGardner/status/1242340323403223041>> [Accessed 15 April 2020].
22. International Union Against Tuberculosis and Lung Disease (The Union). The Union's statement on COVID-19 and smoking, 2020. Available at <https://www.tobaccofreeunion.org/index.php/news-2>
23. Helen Redmond. March 2020. A Scientist Persuaded Italy to Exempt Vape Shops From COVID-19 Lockdown. Filter. Available at: <https://filtermag.org/italy-vaping-coronavirus/>