

COVID-19 and the Manoeuvres of the Tobacco Industry

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CCOVID-19 and smoking are another story written by the pandemic evolution in 2020. This virus has attracted the whole world's attention and since its appearance it has generated many discussions between experts, authorities and the general public. In this context, tobacco industry intervened through numerous scientific and non-scientific statements. 2021 brought hope to the world, but the challenges and successes of 2020 should not be immediately forgotten. Tobacco use remains another slow-moving pandemic in itself, generating eight million deaths each year and about 13% of all deaths, bringing the global economic costs in health care expenditures and loss of productivity to more than 1.4 trillion USD (1). In this editorial, we will try to present what are the echoes and consequences of these manoeuvres of the tobacco industry.

Smoking and COVID-19

The spectrum of coronavirus disease 2019 (COVID-19) is extraordinarily complex, ranging

from mild forms to very severe, deadly conditions. The relationship between this viral infection and smoking has to be assessed for each of the three main stages of this condition.

Stage 1 infection with SARS-CoV-2. The relationship between infection and smoking is controversial. There is a limited number of studies addressing this issue, and only two of them revealed a slight evidence of a reduced risk of infection among smokers (2, 3).

Stage 2 infection with SARS-CoV-2. Symptoms emerge, requiring either an outpatient visit or hospitalization of 24 hours or more. Studies looking for data about the impact of smoking in these patients are scarce and characterised by many limitations (4-7). They showed a minor risk reduction in smokers, but serious concerns arise when a closer look is taken to study population. There is no information on past smokers, assuming that many of them were recorded as non-smokers.

Stage 3 infection with SARS-CoV-2. Disease progresses to advanced, severe forms that either

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require ICU admission, mechanical ventilation or may result in death. A significant association was found between smoking and progression to this advanced disease stage, but further research is needed. Smokers seem to have a 2.25 times higher risk for severe COVID-19 outcomes than never smokers (8, 9).

All these studies, with their uncertainties, have to face criticisms based on the following findings (10-12):

- 1) smokers have a higher likelihood of presenting cough, which is indicative of COVID-19 and often included among symptoms that warrant testing;
- 2) smokers are more likely to seek COVID-19 testing than the general population, even when they do not have the disease, and they will be over-represented in COVID-19 negative populations;
- 3) smokers have a lower adherence to preventive recommendations designed to fight against the spread of COVID-19 than never smokers;
- 4) smoking status was poorly recorded in electronic health records;
- 5) current smokers were more likely to report symptoms that suggest a diagnosis of COVID-19, as shown by a recent study (13).

E-cigarette and COVID-19

Concerning the relationship between e-cigarette use and the risk of COVID-19, the presence of symptoms was nearly five times more likely to occur among past 30-day dual users (14). One study also provides an important reminder: adolescents who vape may be at dual risk for lung injuries – both from COVID-19 and novel vaping products (15). Other studies report the contribution of e-cigarette to respiratory epithelium cell death and damage of immune cells (16, 17). The e-cigarette liquid is responsible for increasing the inflammation and susceptibility of primary human airway cells to viral infections (18). This increase in susceptibility to viral infections induced by e-cigarette usage is explained by alterations of the antiviral immune response (19). There are studies conducted right now that try to provide novel information regarding the effects of e-cigarette use on antiviral responses, as this is especially important in the context of the current SARS-CoV-2 pandemic.

Clinical and laboratory data on the impact of smoking on SARS-CoV-2 infection and COVID-19

Non-smokers exposed to e-cigarette vapor (with and without nicotine) showed no changes in ACE2 expression (20). Moreover, there is evidence showing that these receptors are poorly expressed in respiratory epithelium cells (21). There is no consensus regarding whether tobacco smoke constituents, particularly nicotine, interplay with the SARS-CoV-2 infection mechanism. Results of in vitro studies are more in favor of an increased risk of SARS-CoV-2 infection in airway cells of those individuals exposed to tobacco smoke (22). Two recent French studies supporting the nicotinic protective hypothesis confused people and put tobacco control advocates in defense. They also resulted in people panic, buying nicotine to protect themselves against COVID-19 (the well-known history coming from France) (23-25). Meanwhile, there are studies funded by Philip Morris International (PMI) Foundation, like the one of Caruso *et al.*, advocating for downregulation after exposing bronchial epithelial cells to cigarette smoke (26).

New or old tactics of tobacco industry in 2020

The old tactic, valid in all times, pandemic or not, intended to assure the survival of tobacco industry by hooking a new generation of users, especially young ones, on its products. The recruiting methods were the same in 2020 as in the non-COVID times. The new tactics were revealed at the end of 2020, if we take a look to what happened in many countries: an increase in the so-called corporate social responsibility (CSR), one of the new strategies. These companies provided personal protective equipment (PPE), medical supplies and even money to governments in desperate need, knowing that policymakers would be hard-pressed to turn them down. They collaborated with governments by funding research for new vaccines against COVID-19. The announcement made by the Canadian government regarding the 173 million CAD fund from Medicago, designed to guarantee 76 million doses of COVID-19 vaccine, is an example. Medicago is in close contact with PMI, which owns one-third of Medicago (27, 28). This type of operations was criticized in Romania too

(29). The company tried to convince us that they were a major contributor to the United Nations Sustainable Development Goals even if, in reality, they hinder nearly all of these goals. The Foundation for a Smoke-Free World (FSFW), an entity founded by the tobacco industry, supports science and innovation. In 2021, they are looking for favours or partnerships with governments, possibly by citing their recent CSR activities. Their first objective would be the lobby for financial benefits like the relaxation or delay of tax hikes. 2020 was the year of aggressive politics to get acceptance and to promote new tobacco and nicotine products. Also, PMI used the US Food and Drug Administration's (FDA) ruling on its heated tobacco product (HTP), IQOS, to lobby for regulatory change. Masks or sanitizers were used as branding instruments. Influencers, celebrities, social media, and different websites were used to push the new products, attempting to portray some devices, like IQOS, as an upscale lifestyle product, associated with glamour, etc. (30).

Another attempt from the tobacco industry to influence governments is to roll back regulations for novel products. They also try to influence the Framework Convention on Tobacco Control (FCTC) and Conference of the Parties (COP) by inserting themselves into tobacco control conversations led by the World Health Organization (WHO). All instruments are used. Twitter data are worth to be considered by experts (31). There are many surprising direct or indirect links to tobacco industry in this environment. Philip Morris International was highly active in this COP8 time. Most tweets were about next-generation products (NGPs) or 'harm reduction' (54%) and tended to argue in support of NGPs; around one-quarter were critical of tobacco control (24%). The largest proportion of most active tweeters were NGP advocates, and slightly over half of those had either links to the PMI funded FSFW and/or to the International Network of Nicotine Consumer Organizations, a network to whom the FSFW granted 100,300 USD in 2018. The only clear objective was to generate and 'amplify the debate on harm reduction' around events such as the COP8. They plead as harm reduction advocates, despite continuing to produce and sell hundreds of billions of cigarettes each year. Other attempts are to undermine the implementation of an independent and effective

track and trace systems of tobacco, continuing using illicit trade as an opportunity to establish partnerships with governments, including funding and/or providing training for customs and law enforcement organizations. This pandemic exposure to COVID-19 brought another debate concerning e-cigarettes. The use of e-cigarettes has increased at an alarming pace among youth. From 2011 to 2019, the proportion of high school students who were current e-cigarette users in the US increased from 1.5% to 27.5% (32). The behaviours of young people in this period were emphasized by a recent study. Out of the 1,197 participants to this inquiry (33), one-third – 388 participants (32.8%) – quitte vaping and another third – 422 participants (35.3%) – reduced their use of e-cigarettes, with the remaining third either increasing consumption or switching to another nicotine or cannabis product. Purchasing e-cigarettes shifted to an increased number of online buyers. This is also bad news because it is well known that online retailers are frequently accessible to underage youth and that even when age verification is in place, it is often easily circumvented (34). The lack of comprehensive addiction services for youth who vape or a lack of awareness about existing services made those with high nicotine addiction to remain captive to e-cigarettes during this period (35).

Our mistakes speculated by tobacco industry in 2020. How should we organize our own strategy?

The terminology used in the FDA's July 2020 ruling on IQOS as a Modified Risk Tobacco Product is confusing and creates room for misinterpretation and inaccurate representation. This resource explains what the FDA ruled and debunks the public relations spin PMI is using to portray this ruling as a win for health (30). The health costs of smoking remain a problem in this difficult pandemic times. Every state has now huge, challenging, economic problems. The single most effective way to reduce the health and economic devastation caused by tobacco use is to significantly increase tobacco taxes and prices (1). The increase in government revenues based on tobacco taxation is a solution of the post COVID-19 economic consequences. This money may be used to fund public health and

other sustainable development priorities. The WHO estimates, for example, that a cigarette tax increase of 1.00 USD per pack would lead to an amount between 178 and 219 billion USD only in 2018 (36). STOP – A Global Tobacco Industry Watchdog argues, as part of its Tobacco Pay Up campaign, that governments have the power to hold the tobacco industry financially accountable for the harms it is inflicted leading up to and during the COVID-19 crisis (37, 38). They should use that power. All representatives of governments should be aware that tax avoidance is not morally right, especially during a respiratory health pandemic and at a time when public finances are stretched, but is not illegal. The big tobacco industry companies are using four strategies to achieve that: shifting dividends, notional (fictitious) interest deduction, profit shifting via intra-firm transactions, royalty payments.

Another debate is on smoking and mask wearing. Turkey and North Korea adopted a smoking ban in public, in many areas, external public services, reflecting the hygiene rules of COVID-19, based on the information about higher exposure and adverse effects gathered in large numbers by smokers without mask (39, 40). For e-cigarettes there are three ways to intervene in this COVID-19 period:

- by disseminating widely, the evolving evidence on e-cigarette harms through social media and other avenues;
- by imposing stronger safeguards, including more stringent age verification, while also

taking measures to restrict access at conventional purchasing points, such as gas stations and vape shops;

- by providing robust addiction services for youth struggling with nicotine addiction (35).

Regarding the vaccine, it is strange to see this collaboration of governments with tobacco industry in a moment when there are over 50 vaccines in development globally and the governments do not need to partner with a company whose products are responsible for eight million premature tobacco deaths annually and globally. Smoking cessation data during these COVID-19 pandemic times reveals mixed messages: worldwide Google searches for ‘quit smoking’ did not change from January to April 2020, and studies among smokers showed both less smoking in some and more in others (41, 42). □

CONCLUSIONS

To protect tobacco control policies and save countless lives, policymakers, advocates, and others should report and expose all forms of tobacco industry interference. The COVID-19 pandemic shows little signs of abating any time soon. We need to act and to turn this adversity into an opportunity and seize it to fight the ongoing other heavy pandemic of tobacco use (43). □

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