

COVID-19 Outbreak: A Preferred Time for Tobacco Consumption Cessation to Support Healthcare Management

Rudra Dahal¹, Bhupesh Khadka², Khimananda Bhandari³

¹Faculty of Health Sciences, University of Lethbridge, Lethbridge, AB, Canada

²Freelance Researcher, Calgary, AB, Canada

³Department of Education, Tribhuvan University, Nepal

Corresponding Author: Rudra Dahal

ABSTRACT

COVID-19 is caused by a novel coronavirus, which spreads through aerosols from the nose or mouth of an infected individual. Due to its highly infectious nature, it has negatively impacted individuals' physical, mental and social well-being. The global health care system has been overwhelmed to meet the extreme demand for resources due to the pandemic. Tobacco consumption is an established risk factor for many diseases including severity of COVID-19. In addition, habitual use of tobacco products also increases the risk of COVID-19 transmission through contaminated fingers and tobacco products. The increased risk of infection due to tobacco consumption and exposure to second-hand smoke to family members may motivate smoking cessation. Health care providers should involve in offering evidence based pharmacological and behavioral smoking cessation interventions. This includes leveraging new technology to influence tobacco users, such as delivering telehealth services or apps that allow people increasing access to free or low-cost pharmacotherapy, toll-free quit lines, social media, nicotine replacement therapies, behavioral counselling, health education, and other approved medications. Thus, the pandemic is a unique opportunity to amplify the importance of modifying smoking behavior and tobacco consumption cessation. By doing so, we initiate towards a larger achievement to support global healthcare system and communities by effectively responding to the COVID-19.

Keywords: COVID-19, Tobacco consumption cessation

INTRODUCTION

The COVID-19 pandemic is caused by a novel coronavirus, through the mechanism of cellular entry, viral replication, and virion shedding in the respiratory tract [1, 2]. It spreads through small droplets from the nose or mouth, which are dispersed when an infected person coughs, sneezes, talks, exhales or spits [3, 4]. Angiotensin-converting enzyme 2, which allows coronavirus to infect the alveolar cells, has been reported to be upregulated in the smoker's respiratory epithelium, thus increasing the risk of infection [5]. Due to its high infectivity, it

has caused a vital health catastrophe, globally disrupting the life of individuals, societies, and nations [6]. The pandemic has impacted economic growth, educational norms, and employment opportunities - often altering lifestyles, interfering with the quality of life, and negatively impacting individuals' physical, mental, and social well-being.

The global health care system has been strained to meet the extreme demand for resources due to a massive infection of the virus. A substantial quantity of health resources such as health care workers, medical supplies and equipment, previously

allocated to support other health issues are now being diverted to deal with COVID-19. Though, vaccines are considered an effective preventive measure for the disease, but the availability for the general public is still long to go. We have limited public health measures which emphasize key health behaviors in order to control the spread of the virus; for instance, social distancing along with other measures such as washing hand, sanitizing surfaces and wearing personal protective equipment. On community levels, the most common strategy for containment has been quarantine and isolation. Recent scientific research has highlighted a connection between tobacco consumption and its adverse COVID-19 outcomes and the need for tobacco consumption cessation ^[7], however the importance of the cessation has been given little attention to date.

Tobacco consumption is an established risk factor for many diseases including cardiovascular diseases and chronic obstructive pulmonary diseases (COPD), which appear to be correlated with the severity of COVID-19 ^[8]. In fact, coronavirus can have severe complications and elevated mortality in people with comorbidities such as COPD, diabetes mellitus and hypertension, which are also associated with tobacco consumption ^[9]. It is reported that the risk of COVID-19 severity is four times higher in patients with pre-existing COPD than in patients without COPD ^[6]. This may be explained by systemic and chronic inflammation, diminished respiratory function and capacity, and COPD-related respiratory failure in some patients ^[10]. In addition, tobacco consumption impairs the immune system through peri-bronchiolar inflammation, fibrosis, impaired mucociliary clearance and disruption of the respiratory epithelium, which further increases the risk of respiratory infections including COVID-19 ^[11].

Habitual use of tobacco products also increases the risk of COVID-19 transmission through contaminated fingers

and tobacco products. Furthermore, smokeless tobacco users may also spread the disease through spitting. In addition to classical tobacco smoking behavior, water pipe and electronic cigarettes that are widely used amongst younger population, should not be overlooked, as these modes of consumption may increase the risk of contamination due to repetitive hand interactions with the mouth and blowing off the smoke. By controlling the spread of COVID-19, we effectively respond to reduce the physiological implications of the disease, through precautionary protocols as opposed to reactionary measures.

The effect of tobacco consumption among people with a high risk of COVID-19, may motivate smoking cessation. Additionally, households may adopt indoor smoking bans during the global outbreak of COVID-19 as a reduction of second-hand smoke exposure to family members because the exposure to second-hand smoking can cause similar negative health effects as the first-hand smoker, thereby making them vulnerable to the disease ^[12]. The pandemic appears to affect smokers in different ways; some increase smoking due to stress with social distancing consequently more frequent smoking and smoking relapse, whereas others are motivated to limit smoking, perpetuated by the fear of concerns of contracting COVID-19 ^[13]. Research on residents of Ohio reported that approximately one-third of the smokers attempted to quit, while over half reported a desire to quit smoking ^[14]. Hence, it is an ideal time to quit tobacco consumption, reducing not only the corresponding physiological implications on the smokers but also limiting second-hand exposure to family members.

Tobacco consumption cessation could be an important way towards controlling the spread of the COVID-19 and reducing the burden on the health care system. At the same time, it will initiate a progressive decline in health care costs associated with the pandemic. In addition, the stopping of tobacco consumption

decreases the likelihood of developing other chronic diseases and improving the health outcomes of those with pre-existing conditions^[15]. Tobacco consumption cessation could also increase the chances of overcoming the negative effects of the disease by strengthening the lung's ability, enhancing blood circulation, and lowering inflammation^[5, 11, 16]. A recent study identified that at least four weeks of smoking cessation lowered the risk of respiratory complications compared to current smokers^[15]. Thus, it is recommended that the health care system should take initiative in establishing an effective plan to ensure the optimal care for smokers while prioritizing vaccination, as they could be a key source of transmission. We strongly advocate that effective public awareness campaigns should be aimed at tobacco consumption cessation among smokers to reduce the spread of COVID-19.

Tobacco consumption cessation may seem overly ambitious but when successful its outcomes will positively improve the current state of public health. Therefore, we believe that high-quality tobacco consumption cessation measures should be a part of public health efforts to curb the pandemic. Health care providers should be involved in offering evidence-based pharmacological and behavioral smoking cessation interventions, which might include leveraging new technology to influence tobacco users such as delivering telehealth services or apps that allow people increasing access to free or low-cost pharmacotherapy, toll-free quit lines, social media, nicotine replacement therapies, behavioral counselling, health education and other approved medications. It is important to support more than one billion tobacco consumers globally^[17] from a greater risk of COVID-19. The Global Adult Tobacco Survey shows that more than 176 million smokers bid to quit in the past twelve months, and most stated little to no support when quitting^[18]. As such, increased efforts should be made to support current and former smokers to promote smoking

cessation among other health promotional lifestyle modifications. A firm determination and readiness to quit enables one to utilize different innovative measures to stop smoking, such as engagement in learning new skills, practicing meditation, setting goals for cessation, and perusing gradual cessation.

Each individual has huge responsibilities towards their community and country. Individuals' health behavior models their overall health and the public health burden that individuals, societies, and countries encounter, which is clearly demonstrated with COVID-19. In addition to following public health endorsements and adapting to the recommended lifestyles to slow down viral transmission, it is also the time for everyone to be pioneering and practically taking extra steps to flatten the curve. Successful cessation of tobacco consumption, a meaningful health behavior adjustment, depends on an individual's rationale/enthusiasm and atmosphere. It is an authentic opportunity to appreciate the importance of modifying smoking behavior and tobacco consumption cessation. By doing so, we initiate a larger achievement to support global healthcare systems and communities by effectively responding to COVID-19, reducing the public health burden brought on by tobacco consumption and contributing to return the current investments on COVID-19 pandemic.

Funding statement:

This project is solely generated by author. No funding is obtained for this project.

Competing interest:

Author declares no competing interest.

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How to cite this article: Dahal R, Khadka B, Bhandari K. COVID-19 outbreak: a preferred time for tobacco consumption cessation to support healthcare management. *Int J Health Sci Res.* 2021; 11(3): 178-181.
