

Smoking Cessation amid COVID-19 Pandemic: Making Every Contact Count

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Abbreviations: coronavirus disease 2019, **COVID-19**; severe acute respiratory syndrome coronavirus 2, **SARS-CoV-2**; angiotensin-converting enzyme 2, **ACE2**

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Recently the joint study [1] by YouGov and the campaign group Action on Smoking and Health have published their findings on the impact of coronavirus disease 2019 (COVID-19) on the smoking behaviour of current adult smokers. The study which interviewed over 1,000 adult participants residing in the United Kingdom during April 2020 revealed some positive findings with regards to smoking behaviour in association with COVID-19 pandemic: 36% of smokers had reduced the amount of tobacco or cigarettes smoked while 8% of smokers had tried to quit smoking. Collectively, the proportion of smokers who had reduced or tried to quit smoking was more than the proportion of smokers (20%) who had bought tobacco or cigarettes in larger quantities than before (bulk-buying or stockpiling purposes due to COVID-19 associated lockdowns). Though lesser in proportion, it is also encouraging to observe that 2% of smokers had quit smoking in the last 4 months, solely or partly due to COVID-19.

These positive findings may be due to media publicity where smokers have been predicted to have a higher risk of COVID-19 acquisition than non-smokers. Though no studies as yet that have proven such association, it has been suggested that smokers could be more vulnerable to be infected with COVID-19, as their fingers (and possibly contaminated tobacco or cigarettes) are often in contact with their lips, which increases the likelihood of transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative pathogen of COVID-19, from hand to mouth [2].

Indeed, similar to individuals with chronic obstructive pulmonary disease, smokers have been reported to have increased expression of angiotensin-converting enzyme 2 (ACE2) in bronchial epithelial cells in the lower respiratory tract, which acts as the port of entry for SARS-CoV-2 into host cells [3]. Such finding not only indicates the possibility of the heightened risk of COVID-19 acquisition among smokers but also suggested the increased risk of developing more severe illness due to possibly higher viral load where smokers may have more pronounced cytokine storm syndrome arising from immune-mediated clearance of the overwhelming viral load. Thus far, findings on the association between smoking and severity of COVID-19 are mixed, though a large-scale study on 1099 patients with COVID-19 from 552 hospitals in China reported a higher proportion of current and former smokers among COVID-19 patients that required intensive care unit admission, mechanical ventilation, or who had died [4]. Moreover, smokers constituted a higher proportion among patients who had severe manifestations of COVID-19.

Every clinicians around the world should seize such golden opportunity to encourage their active smoking patients or clients to quit smoking, with citation of possible increased risk of contracting COVID-19 and its associated severe illness among smokers, since many smokers may already have the intention to quit amid COVID-19 pandemic as reported in the aforementioned survey, regardless whether it is owing to the fear of contracting COVID-19 or difficulty in purchasing cigarettes amid COVID-19 associated lockdowns. Every clinician, especially those working in the community or primary care, are in a unique position with the current pandemic to fully utilize the established 5-step treatment framework for smoking cessation (the '5A's approach'): ask about tobacco use, advise quitting, assess readiness to quit, assist smokers ready to quit, and arrange follow-up [5]. For patients or clients who are prepared to stop smoking or at least to reduce the number of cigarettes smoked per day, pharmacotherapies for smoking cessation, including nicotine replacement therapy, varenicline, and bupropion can be offered [6].

While it can be challenging to provide smoking cessation service in a busy practice, which may be made worse amid COVID-19 pandemic due to a need to observe social distancing, there is clear evidence that brief (<five minutes) advice to quit smoking at each patient or client encounter can increase smoking abstinence rates, regardless if patients are prepared for immediate quitting. A 2013 Cochrane systematic review [7] of 42 trials with over 31,000 smokers concluded that a brief advice intervention could increase the baseline unassisted quit rate of 2-3% by a further 1-3%. Clinicians who have concerns over difficulties in the follow-up of patients that may pose a barrier to successful smoking cessation amid COVID-19 pandemic due to imposed social distancing rules and lockdowns could avail themselves of telehealth approaches. As simple as telephone follow-up may be useful to increase patients' smoking abstinence rates. A 2019 Cochrane systematic review [8] of 104 trials reported evidence of moderate certainty that proactive telephone counselling increases quit rates in smokers. Clinicians could also refer their patients for external resources including telephonic quitline support if follow up proves to be not feasible and also to involve other trained healthcare professionals to jointly provide smoking cessation services. The same systematic review [8] reported moderate-certainty evidence that proactive telephone counselling aids smokers who seek help from quitlines.

In conclusion, we would like to once again stress that clinicians should not only engage smokers in the process of smoking abstinence at every opportunity amid COVID-19 pandemic, since the readiness for smoking cessation may have been facilitated by the fear of contracting COVID-19 among smokers. This includes patients who have no COVID-19 as yet and patients who have had COVID-19 and have since recovered from acute illness. In addition, controversial smoking cessation strategies such as electronic cigarettes should be discouraged as there is documented evidence regarding the vaping-related pulmonary diseases, which may further reduce pulmonary reserve in smokers [9].

Conflict of interest statement: The authors declare that there is no conflict of interest.

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