The Pandemic That Always Strains Critical Care: Smoking

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On April 1, 2020, The Guardian newspaper reported that tobacco companies were partnering in the United States and United Kingdom to create a coronavirus disease (COVID-19) vaccine. That the tobacco industry is working to save us from our current pandemic might surprise many readers, although the industry has a long history of public relation campaigns to combat its negative image (1). As this is written, the estimated worldwide death toll from COVID-19 is over one million. But in every year, more than 7 million people die prematurely from smoking-related causes worldwide (2). There are no screaming headlines or websites devoted to tallying the dead, but every day, the news should read, “another 20,000 died today from smoking.”

Considerable research is ongoing regarding the relationship between smoking, nicotine, and COVID-19 with few concrete answers (3–6). The known receptor for COVID-19 to enter cells, ACE2 (angiotensin-converting enzyme 2), is increased in lung tissue of active smokers and in people with chronic obstructive pulmonary disease (COPD) (4, 7). Therefore, it would seem that smokers should be at an increased risk of both contracting COVID-19 and developing severe infection (7). The data have been mixed, with most studies suggesting that active smoking may predispose to infection and progression to severe disease (8, 9) but a few studies (some unreviewed) suggesting that smokers may be protected from getting COVID-19 (10–12). However, nicotine itself has also been (separately) proposed as a potential therapeutic agent in COVID-19 because of its activation of nicotinic cholinergic receptors (8).

With large epidemiological studies ongoing worldwide, we will slowly gain a greater understanding of factors, such as smoking, that impact COVID-19 risks and outcomes (13). But whatever the effect of smoking on COVID-19, as things stand now, smoking remains a much greater killer than COVID-19, and we can’t lose sight of the danger posed by smoking itself. Moreover, it is not just the endgame of death that is of concern to individuals who are smokers. Many people live with debilitating diseases that are driven by smoking: not just COPD but cardiovascular disease, lung cancer, and esophageal cancer; in fact, one-third of all cancers in the United States are attributable to smoking (14).

Attention has begun to shift to the long-term sequelae people are living with after contracting COVID-19, including fatigue, shortness of breath, and chest pain (15, 16). However, we should remember that there are many chronic sequelae of the diseases caused by smoking, including fatigue, shortness of breath, and chest pain. Moreover, although the COVID-19 pandemic has placed incredible pressure on hospitals and intensive care units (ICUs), the demand for hospital beds, ICU beds, surgeries, and cancer treatments on any regular day are much higher than they would be in a world without tobacco.

Until now, most people have had only the vaguest idea of what it means to be critically ill, what it means to be on a ventilator, and the resources and personnel required to care for patients who need to be in an ICU. But the sudden focus on ICU beds and ventilators for COVID-19 has caused widespread discussion of our critical care needs as a society. Under normal circumstances, the United States has around 100,000 ICU beds, and at any given time (in the pre–COVID-19 world), about 80% of those beds were in use (17). The reality is that built into that normal demand for ICU beds is an endless surge—a surge of all those patients with COPD exacerbations, heart attacks, and smoking-related cancer surgeries filling those ICU beds. We have been living in a chronic pandemic. We have accepted this as the status quo. But it is neither natural nor inevitable. It is a pandemic of our own making. And taxing the system in this way comes with chronic costs.

There is little doubt that COVID-19 poses a grave threat to our health and...
financial and social well-being, without respect for borders—whether in the developed or the developing world. Clearly, we need to marshal unparalleled resources to combat the threat from this pandemic. But, at the very least, the current focus on health care should remind us of the gravity of the threats we have been living with all along. We should be redoubling our efforts to reduce smoking and minimize the overall number of people who need to experience care in an ICU, require hospital services, or live with shortness of breath or other symptoms. Although in the long run, decreasing smoking may ultimately tax our medical system more as people would live longer, in the short term, we would reduce demands on the healthcare system and save millions of lives (18). Gratitude is in order for any group creating a successful vaccine against the novel coronavirus we now face. But no good deed could ever erase the memories of all those lives lost to smoking.

Author disclosures are available with the text of this article at www.atsjournals.org.

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