

Airing it Out: How Dental Offices Can Improve Safety and Patient Peace of Mind

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by Marshal Sterio, Surgically Clean Air Inc.

Every aspect of our lives was completely upended in March 2020 when the novel coronavirus first reached Canada, and in a matter of days all of us had to adjust to a “new normal” that was anything but normal. The healthcare industry was severely affected as medical professionals fought to stay ahead of the curve, and non-emergency healthcare – including dentistry – was pushed to the back burner while federal and provincial government agencies scrambled to limit the transmission of COVID-19. Now we are faced with the aftermath of the first 18 months of the pandemic as dental practices reopen in a climate in which millions of Canadians are afraid to receive oral care because of the perceived risks of the pandemic. The good news is that dentists have a number of tools at their disposal, including using portable air purification systems to not only help reduce the risk of illness but also to allay the fears of a nervous public.

The reality is that we didn’t really know much about coronavirus when it first emerged. We didn’t know how it was transmitted, we didn’t know how easily it was transmitted, and we didn’t know exactly what measures to take to stay healthy. As part of this initial crisis response, Canadian dental practices were forced to close in the middle of March 2020 and were only allowed to reopen at the beginning of June. And even then, they were only able to open for emergencies before elective procedures were permitted a few months later. This was devastating for thousands of dentists across the country, and it was also bad for public health because patients were unable to receive care.

As the pandemic progressed, epidemiologists learned more about how COVID-19 spread, and many of the initial recommendations, such as wiping down delivery bags and avoiding public parks, proved to have limited benefit. As it turned out, there were very few cases of transmission from surface contact or from socially distanced people gathering in outdoor spaces. That's the good news. On the other side of the coin, indoor events proved to be the flashpoints for most of the major outbreaks in North America. That's why restaurants, barber shops and many retail stores were the first businesses to go dark during the provincial and federal shutdowns that have been enacted across Canada since the beginning of the pandemic.

Because of the climate of fear about indoor spaces, people put off oral healthcare even after dentists were allowed to reopen. The majority of Canadian dentists only provided remote care rather than in person appointments. Consumer confidence has also taken a significant hit: according to the General Dental Council in the UK, last December almost a third of Britons felt less safe about visiting dentists because of the pandemic.

The safety dance

As it turns out, these fears were unfounded. For starters, dental offices adopted the most rigorous possible protective measures to keep patients and dental workers safe, including limiting the number of patients allowed in offices, removing toys and magazines from waiting areas, and requiring the highest levels of personal protective equipment (PPE) for everyone. Eighteen months into the pandemic, there are no documented cases of Canadians getting COVID-19 from a dental office.

A few scattered reports in 2020 indicated that HVAC systems were actually spreading COVID, but it turned out that this was based on a few anecdotal examples and scientific research did not support this claim. Nevertheless, according to the CBC, the perception persists that normal ventilation devices aren't keeping people safe. That's bad news for indoor businesses – including dental clinics – that rely on these systems. In order to bolster consumer confidence, dental offices need to go the extra mile and make their air extra purified.

Evidence-based recommendations

This isn't smoke and mirrors or marketing babble: it's actually based in science. The Centers for Disease Control in the U.S. "recommends a layered approach to reduce exposures to SARS-CoV-2, the virus that causes COVID-19. This includes using multiple mitigation strategies, including improvements to building ventilation, to reduce the spread of disease and lower the risk of exposure."

In practical terms, this means supplementing existing HVAC systems with additional equipment to provide an extra layer of protection for people in indoor spaces.

There are a lot of options for doing this, but unfortunately not all purification approaches are equal. One of the best ways to keep air fresh is through the use of fans, but this only works if windows can be opened, and fresh air can be introduced. That's because recycling air in a closed system does not fix the inherent problem. There are a large number of devices that remove large particulates, which unfortunately does not significantly reduce the effect of harmful microbes. Instead, dental offices should look for systems that rely on advanced technologies such as ultraviolet germicidal irradiation (UVGI) to actually reduce pathogens and allergens in the environment. In fact, this is a key recommendation of the CDC in its official guidelines to help businesses improve indoor air quality and reduce the likelihood of illness.

Because of the rapid rate of vaccinations in Canada over the last few months, many people are already thinking that the pandemic is over. Unfortunately, it's not that simple, and we will be dealing with the ramifications of COVID-19 for years and possibly even decades to come. Dental offices don't have the luxury of waiting that long to ratchet their businesses back up to full capacity. By supplementing their existing ventilation systems, dental offices can provide a powerful two-pronged approach to promoting patient safety and increasing public confidence in their practices.

About the Author

Marshal Sterio is the CEO of Surgically Clean Air Inc., a Toronto-based manufacturer of portable systems that purify air by supplementing existing HVAC systems. The company's products are market leaders in dental practices currently being used in over 45,000 dental offices, and are used by Fortune 500 companies, Major League Baseball clubs, the NBA, the NHL and thousands of



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