

Dentistry and the Pandemic: A Year of Reckoning

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In March 2020, the world that we know irrevocably changed forever. It feels like “Groundhog Day” all over again, and it seems that the nightmare is here to stay. It all began on the January 8, 2020, when China grimly announced that coronavirus disease-2019 (COVID-19) pandemic is caused by the “severe acute respiratory syndrome coronavirus 2” (SARS-CoV-2)¹ but it was not until March 2020 that the situation swiftly careened out of control and is unequivocally posing the greatest challenge to humanity worldwide since the end of the Second World War. While the scientific community heroically galvanized itself and raced against time to provide viable solutions to this formidable foe in the form of vaccines, the worldwide dental fraternity has had to grapple with an extraordinary situation evolving in real-time and ensure that we responded robustly to this daunting health emergency that has spared no corner of our beloved planet. Initially, COVID-19 ensured cessation of all non-urgent dental care in most parts of the world but with increasingly significant inputs about the nature of the pathogen from the scientific community, the dental community has been able to cobble together a workable plan in reconfiguring and restructuring the dental practice in consonance with the situation at hand. It is fiendishly arduous to estimate the massive impact on the dental profession, but it is safe to assume it to be substantial.

Dental professionals have had to shield themselves and eschew/reduce standard treatment procedures. It has been established that dental professionals will be challenged in no small measure due to the nature and magnitude of work and risk involved, respectively, which may be attributed to the distinctive nature of dental treatment procedures, such as restorative and endodontic procedures, ultrasonic scaling, and tooth preparation, which predictably, lead to aerosol production. So, proper use of PPEs (personal protective equipment) has been deemed mandatory in this scenario. It has been established that SARS-CoV-2 can potentially be active for a minimum of 3 hours in an aerosol, with diminishing infectious titer from 103.5 to 102.7 tissue culture infectious doses (TCID50) per liter of air.² The dental fraternity must be indubitably acquainted with this information while devising an effective treatment protocol. Most countries are acutely aware of relevant regional infection control protocols. A common, multipronged approach with the requisite IPC (infection, prevention, and control) precautions has been mandated for all patients irrespective of their health conditions. Cardinality, it has been deduced that the viral spread is chiefly via inhalation/ingestion/direct mucous contact with saliva droplets. Another pertinent point to remember is that the virus can subsist for more than a week on physical entities, hands, and surfaces that had been contaminated by infected saliva.^{3,4}

The most striking global guideline initially proposed was that dentists need to refrain from making patient appointments and only serious conditions that require instant intervention can be

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deliberated during the COVID-19 outbreak. But since this was not a sustainable situation, the impasse cannot and will not last the duration of the ongoing pandemic. It has also been opined that certain emergency dental conditions should be managed by pharmacological modalities (antibiotics and analgesics) as this practice can alleviate patients’ pain and obtain precious time to treat the patient in an appropriate time/setting. Currently, while the dental professionals are in perpetual tenterhooks thanks in no small part to the current unprecedented situation, they have eventually come to realize that living during this terrible pandemic is the “new normal” and it is not going away any time soon. Three significant questions need to be answered before any patient reaches the dental chair: body temperature of the patient, and other significant symptoms in the recent past, the clinical gravity of the case, and the potential risk of contact with other infected persons. Tele-dentistry is rapidly becoming *de facto* norm of clinical practice for all non-emergency cases in many parts of the world and this may forever alter the clinical practice landscape.⁵ The dentist has been constrained in performing his normal duties and forced to straddle the tightrope between ensuring the safety of dental care professionals and providing optimum dental care to patients. It is a perplexing situation, but it must be confronted head-on, and the dentist must incontrovertibly separate the negotiables from the non-negotiables. Although the dental practice will slowly resume its normalcy, we need to rethink the future policies and shortcomings of the existing oral healthcare system. The Brobdingnagian effect of the coronavirus on all our lives cannot be understated.

To say that the pandemic has had a deleterious impact on private dental practitioners and colleges would be an understatement. It has left no person unscathed and the uncertainty coupled with the potential loss of income has wreaked incalculable havoc. But by far, the most formidable trial that dental educational institutions have had to endure was to ensure that students remain motivated amid

all this turmoil. The situation was so fluid that it took considerable time for the dental fraternity to mount an effective strategy in dealing with such unprecedented circumstances.

Sizeable investments had to be made on equipping and protecting oneself against the deadly virus. Dental colleges had to formulate new teaching strategies considering the gravity of the situation while making allowances for the lack of usual capital inflow from treatments and other activities. The dental fraternity had to strictly enforce the “triage” system in most parts of the world and dental practitioners had to be content with a significant loss of income. The wider impact of all this on the mental health of dental professionals deserves further study. The far-reaching changes and modifications that the dental community had to adopt will hopefully make us more resilient when confronted by similar challenges in the future.

That students are enduring barely fathomable levels of stress is evident for the entire world to see and a transformation of traditional teaching methods is imperative. Dentistry is a scientific pursuit that necessitates close human contact but as the saying goes “necessity is the mother of invention”. Innovations in online learning have saved the day to a certain extent but much work remains to be done. The mental health of the students cannot be brushed aside as a minor quibble. Many students exuded symptoms of loneliness and are manifestly aggrieved about their mental and physical health apart from sweating over the gargantuan toll that this has taken on them socially. This is just cause for perturbation as all the above-mentioned challenges that students are forced to combat are linked with deteriorating health indicators, including difficulties with alcoholism, tobacco and drug abuse, and hazardous behavior that can swiftly snowball into something more sinister.⁶⁻⁸

Effective engagement and articulation are indispensable tools for abating student fears. Recent studies adumbrate that schools should vigorously convey ideas and decisions while including students in important meetings/discussions. Humans have grappled valiantly with various epidemics and viral outbreaks throughout history.⁹ As dental educators and professionals, the

onus is on us to create a system that addresses such challenges head-on and engender viable solutions. A cataclysmal global public health crisis has been unleashed by the COVID-19 pandemic. But it is the science that we must trust and take refuge in. To quote the immortal Marie Curie, “Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.”

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REFERENCES

1. Li Q, Guan X, Wu P, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *N Engl J Med* 2020;382(13):1199–1207. DOI: 10.1056/NEJMoa2001316.
2. van Doremalen N, Bushmaker T, Morris D, et al. Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1. *N Engl J Med* 2020;382(16):1564–1567. DOI: 10.1056/NEJMc2004973.
3. Meng L, Hua F, Bian Z. Coronavirus disease 2019 (COVID-19): emerging and future challenges for dental and oral medicine. *J Dent Res* 2020;99(5):481–487. DOI: 10.1177/0022034520914246.
4. Peng X, Xu X, Li Y, et al. Transmission routes of 2019-nCoV and controls in dental practice. *Int J Oral Sci* 2020;12(1):9. DOI: 10.1038/s41368-020-0075-9.
5. Sachdev V. COVID-19: challenges, opportunities, and the way ahead for dentistry. *J Dent Spec* 2020;8(1):1–2. DOI: 10.18231/j.jds.2020.001.
6. Kassel J, Stroud L, Paronis C. Smoking, stress, and negative affect: correlation, causation, and context across stages of smoking. *Psychol Bull* 2003;129(2):270–304. DOI: 10.1037/0033-2909.129.2.270.
7. Umberson D, Crosnoe R, Reczek C. Social relationships and health behavior across the life course. *Annu Rev Sociol* 2010;36(1):139–157. DOI: 10.1146/annurev-soc-070308-120011.
8. Umberson D, Liu H, Reczek C. Stress and health behaviour over the life course. *Adv Life Course Res* 2008;13:19–44. DOI: 10.1016/S1040-2608(08)00002-6.
9. Chang T, Hong G, Paganelli C, et al. Innovation of dental education during COVID-19 pandemic. *J Dent Sci* 2021;16(1):15–20. DOI: 10.1016/j.jds.2020.07.011.