

'Covidodontics' to Confront the 'Covidified' Dental Education

The COVID-19 pandemic has turned the world upside down in the wink of an eye! Everything about this novel coronavirus is indeed novel! From social life to societal norms, handshakes to hugs, economy to education, it has shattered all.

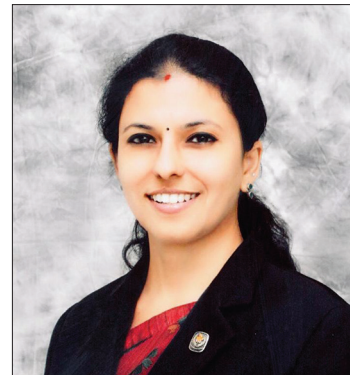
With the Occupational Safety and Health Administration (OSHA.gov)^[1] classifying dentists in the very-high-risk category due to the potential of exposure to coronavirus through aerosol-generating procedures (AGPs), dental clinics and schools had to close, disrupting dental practice as well as dental education.

It is indeed a great challenge to dental educators, administrators and curriculum managers to safeguard the health of students, faculty and patients on the one hand, while ensuring no disruption in the education of students, on the other hand. Overnight, there was an imposed transition of the entire educational world into the online platform,^[2] trying to pacify all involved, that we have not totally stopped training our students. However, the truth is, neither the students nor the teachers are geared up for this imposed transition, evoking a dubiousness whether learning can truly happen in this environment. Unlike in other professional courses where online learning and simulated innovations may help, health professions education (HPE) cannot survive on this premise. It is imperative that we train our dental graduates and postgraduates to attain automatism in psychomotor skills through patient involvement (pun intended).

So, the question is, how long should we wait? When can normalcy return? When can we free ourselves from the claws of this pandemic and rebuild the disrupted pedagogy? There is no definitive answer to this yet. Moreover, after the lessons learned from severe acute respiratory syndrome (SARS-CoV), Middle East respiratory syndrome (MERS-CoV) and now COVID-19,^[3] it is a long overdue that we galvanize our curriculum to be prepared to face any such pandemic crisis instead of wasting time and waiting for the current one to vanish. We need to adapt to the 'new normal' and find a solution to the 'Covidified' dental education.^[4]

The time is propitious for us to get ready with a new edition to our curriculum which I call the 'Covidodontics' which can be defined as the specialty that deals with training our dental undergraduate and postgraduates to tackle any (including the current) pandemic situation and prepare curriculum managers, academicians and administrators to be ready to face such untoward occurrences in future.

Adding Covidodontics to the curriculum will behoove us to scrutinize all dimensions of dental education,



redefining the learning outcomes, improvising the teaching methods, revising the current assessment practices and most importantly seeing that all these are functional in a learning environment which is conducive to these changes.

Although infection control was an inherent and important aspect of the learning outcomes in dental curriculum until now, the pandemic situation calls for an additional emphasis and increased importance to this area. We must be constantly aware that the infectious threats may challenge the infection control regimens routinely practiced in dental schools. Although it is recommended to minimize AGPs^[5] during pandemic times, we must innovate and incorporate methods to avoid infections spreading via AGPs. Practicing and incorporating a layered approach of infection control^[6] in all clinical postings should be made compulsory. Training students to use standard personal protective equipment (PPE), pre-procedural rinses before every case, rubber dams when feasible, and high-volume suction devices must be made a routine practice^[6] in clinical training. Stringent criteria for screening patients, disinfection after every patient treatment, need to be emphasized more than ever.^[7]

Another area of revision that Covidodontics calls for, to add on to the existing curriculum, is in its pedagogical improvisations. Online lectures are recommended during the pandemic times to avoid the needless conglomeration of people and associated risk of infection. This 'emergency remote teaching'^[8] imposed on health professions teachers overnight has created chaos and confusion not to forget the fear that has been generated.^[9] This predicament has arisen because health professions curriculum has never considered online education as an option or an alternative. Neither the teachers nor the students are ready for this transition. Hence, it is important to incorporate different online strategies into routine teaching learning sessions. Using hybrid models^[2] involving synchronous and asynchronous

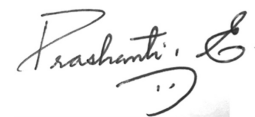
sessions will be an adjunct that Covido-dontics will bring to the curriculum. This will help teachers and students to adapt to the unprecedented times with ease and comfort unlike what is happening now. It is worth encouraging students to engage in self-directed learning, giving them online resources and guiding them how to learn. Clinical training and assessment pose daunting challenges in pandemic times. Till we are able to restore clinical training and assessment in its pre-pandemic pristine purity, we will have to explore, experience and experiment with digital clinical placements, videotaped vignettes and mannequin simulators as patient surrogates.^[10-14] Concomitantly, screen-based assessments replacing clinical examination on real patients and programmatic assessments supplanting the single high stakes final examination will undergird the current (and eventually bolster the subsequent) evaluation strategies.

Adding Covido-dontics as a part of the curriculum, places a great responsibility onto the curriculum managers and management alike. In order to support faculty and students to continue with dental education without any disruption, dental schools need to invest time and money in two areas. One is in faculty development and the second is in the development of the infrastructure (both clinical and academic).

Evidence is elusive now regarding the most effective method in reducing aerosols and splatter during AGPs. Nevertheless, we are currently working on finding the best intervention for reducing contaminated aerosols in the dental clinic.^[15] Equipping dental operatories with efficient filter systems such as high-efficiency particulate air and high evacuation systems, is a worthy step.^[6] Building isolated wards for treating potential suspects and providing access to good infection control measures with enough PPE will enable dental schools to tackle pandemic situations with more confidence.

Faculty development programs to convert the technophobic health professions education teachers into technophiles, establishing institutional online platforms for teachers to conduct online sessions while training students and faculty to regularly incorporate online teaching learning activities and assessments into their routine practice will facilitate the acclimatization and adaptation to the pedagogical changes imposed by the pandemic with ease.^[2] We must note that most of the entrance examinations for students are in the form of online multiple-choice question examinations. Incorporating online assessment strategies as a part of the curriculum will also ensure that the students are primed for their future examinations while it serves its purpose in times like this.

Pandemics come and go; that is out of our control. But, as dental academic leaders, what is in our hands is the armamentarium to confront it – Covido-dontics – the response to this Covidi-fied dentistry!



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References

1. Occupational Safety Health Administration. Guidance on Preparing Workplaces for COVID-19: U. S. Department of labour; 2020 [Available from: <https://www.osha.gov/SLTC/covid-19/dentistry.html>]. [Last accessed on 2020 May 27].
2. Eachempati P, Ramnarayan K. Ten maxims for out of class learning to outclass the academic challenges of COVID-19. *MedEdPublish* 2020;9:1-10.
3. Gilbert GL. SARS, MERS and COVID-19—new threats; old lessons. *Int J Epidemiol*. 2020;1-3.
4. Bhatnagar P. What is the “COVID-Ified” Future for Dentists? *Dentistry IQ*; 2020. Available from: <https://www.dentistryiq.com/covid-19/article/14172811/what-is-the-covidified-future-for-dentists>. [Last accessed on 2020 May 27].
5. Dental Council of India. Dental Clinics Protocol- Advisory; 2020. Available from: http://dciindia.gov.in/Admin/NewsArchives/Dental_Clinics_Protocols_Final.pdf. [Last accessed on 2020 May 27].
6. Harrel SK, Molinari J. Aerosols and splatter in dentistry: A brief review of the literature and infection control implications. *Am Dent Assoc* 2004;135:429-37. Available from: <https://pubmed.ncbi.nlm.nih.gov/15127864>. [Last accessed on 2020 May 27].
7. 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):481-7.
8. Hodges C, Moore S, Lockee B, Trust T, Bond A. The Difference Between Emergency Remote Teaching and Online Learning. *Educ Rev*; 2020. Available from: <https://er.education.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning?> [Last accessed on 2020 May 27].
9. Prashanti E, Ramnarayan K. Covido-pedago-phobia. *Med Educ* 2020;54:678-80.
10. Sam AH, Millar KR, Lupton MGF. Digital Clinical Placement for Medical Students in Response to COVID-19. *Academic Medicine*. 2020; [Publish Ahead of Print].
11. Lim ECH, Ong BKC, Seet RCS. Using videotaped vignettes to teach medical students to perform the neurologic examination. *Journal of General Internal Medicine*. 2006;21:101.
12. Lim ECH, Oh VMS, Koh D-R, Seet RCS. The Challenges of “Continuing Medical Education” in a Pandemic Era. *Annals Academy of Medicine Singapore* 2009;38:724-6.
13. Alsafi Z, Abbas A-R, Hassan A, Ali MA. The coronavirus (COVID-19) pandemic: Adaptations in medical education.

International Journal of Surgery. 2020;78:64-5. doi:10.1016/j.ijssu.2020.03.083

14. Wadi M, Abdalla ME, Khalafalla H, Taha MH. The assessment clock: A model to prioritize the principles of the utility of assessment formula in emergency situations, such as the COVID-19 pandemic. MedEdPublish. 2020; 9(1) <https://doi.org/10.15694/mep.2020.000086.1>
15. Kumbargere Nagraj S, Eachempati P, Paisi M, Nasser M, Sivaramakrishnan G, Verbeek JH. Interventions to reduce contaminated aerosols produced during dental procedures for preventing infectious diseases. Cochrane Database of Systematic Reviews. 2020(7). DOI: 10.1002/14651858.CD013686

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