

Consequences of COVID-19 Pertaining to Dentistry

Jacob A. Siler '23

Introduction

The COVID-19 pandemic had a profound impact on healthcare, including the dental industry [1]. During the height of the COVID-19 pandemic dental practice operations decreased by 80% [1]. A two-month shutdown was imposed as dentistry was deemed a non-essential business, as a result many dental practices only operated on an emergency basis. Many dentists I have spoken to have commented on how almost three years later are still catching up on this scheduling backlog. This paper will discuss two broad ideas that this postponement in dental care might cause in the future. The first being the long-term impact of delayed dental maintenance including hygiene and basic functional procedures. The second being how dental practices have adjusted and adapted to the pandemic both practically and financially.

Dentistry was deemed a non-essential business during the COVID-19 lockdown due to the high risk of transmission and to try and preserve Personal Protective Equipment (PPE) for overwhelmed hospitals [3]. Dentists were allowed to do emergency procedures but had to postpone all elective procedures and cleanings [3]. However, the American Dental Association (ADA) at the time released a statement arguing that dentistry is in fact essential as "its role in evaluating, diagnosing, preventing or treating oral diseases affects systemic health" [4]. Oral health is extremely important as poor oral health is not only related to oral disease but also other chronic diseases such as Diabetes, Heart Disease, and neurodegenerative diseases [5]. However, dentistry was deemed a non-essential business in efforts to reduce strain on the healthcare system in a time of crisis. This decision could put strain on the healthcare system in the future as many dentists were unable to treat and diagnose oral diseases that could cause chronic diseases in the future.

Discussion

Dentists had to adapt as protocol was adjusted and changed to align with the COVID-19 regulations. These regulations were strict as COVID-19 is transmitted through airborne particles and droplets that contain the virus, thereby when the particles land on someone else's eyes, nose, or mouth it is highly likely to lead to transmission [2]. Thereby dentists and dental assistants were at high risk for catching COVID-19 as they work in an environment where they are very close to patients who have their mouths open for long periods of time. Before COVID-19 dental offices had to comply with certain (ADA) protocols to protect against the spread of blood borne pathogens such as

Hepatitis. These protocols included wearing a surgical mask and glasses, wiping down all surfaces after appointments, sterilization of all dental instruments, and use of protective barriers. Therefore, during COVID-19 protocol was changed immensely as they had to protect against both blood borne pathogens and airborne pathogens. To protect against airborne pathogens many dental offices implemented the use of face shields, gowns, and a pre-screening process. However, the pre-screening process was not always effective as not every person infected with COVID-19 showed symptoms or had a fever, despite still being able to transmit the virus. There was also the risk that the dentist or a person on the dental staff was infected and could potentially transmit the disease to all patients that visited that day. As a result of these risks when the COVID-19 pandemic was at its height many dental offices were closed, only operating under emergency circumstances. The offices that were operating had to adjust certain procedures as many stopped using aerosol-spewing power equipment and reverted back to the use of traditional hand tools in efforts to minimize the number of airborne particles [8].

The COVID-19 pandemic has also had an impact on dentistry economically. This is not uncommon as almost all businesses suffered during the height of the COVID-19 pandemic. PPE was not only extremely hard to find due to supply chain issues, but also incredibly expensive as certain materials tripled in price [8]. It was reported that 70% of dental offices suffered financial losses during the pandemic [6]. While dental practices patient volume and practice employment has rebounded, they are still below the pre-pandemic numbers [7]. Furthermore, projections show that dental care spending will decline significantly (>20%) in the coming years [7]. This is important as it affects the amount of people dental offices can employ and therefore the volume of patients, they are able to see. As mentioned earlier many dental offices are behind schedule from the COVID-19 shutdown. Therefore, if the staffs are the same size or even smaller it makes it almost impossible to catch-up. Furthermore, there is likely to be increased restorative care procedures from the lack of treatment thereby further filling up the schedule. Finally, this backlog will likely have effects on the healthcare system down the road as it is best to fix a dental problem as early as possible as they often snowball into causing more serious conditions. As a consequence of the COVID-19 pandemic it is likely that we will see strain on the health care system for generations to come because of the prioritization to treat COVID-19 patients that shut down other non-essential healthcare practices such as dentistry.

Conclusion

COVID-19 has impacted dentistry both positively and negatively. Like all businesses dentistry had to adapt to the new reality COVID-19 created. This impacted dentistry positively by implementing a stricter sterilization protocol, with pre-screening procedures still being used in many offices. However, COVID-19 had a negative economic impact on the field of dentistry as many dental offices were shut-down thereby creating a backlog of patients needing treatment. Furthermore, the procedures that were performed during COVID-19 primarily used traditional instruments that took longer than if newer instruments had been used thereby further backing up appointments. As a result, many dental offices are not operating at the capability or productivity they were before COVID-19. Furthermore, there are impacts that are still yet to be seen. An example of this is dental offices being deemed non-essential which resulted in a lack of care during the height of the pandemic which will likely negatively impact the healthcare system in the future. Finally, there are impacts that are not yet realized or mentioned in this paper. Such possibilities might include the effectiveness of dental education during COVID-19 as many dental schools saw decreases in clinical experience. Only time will reveal the ultimate impact of COVID-19 on dentistry. Although the best way to move forward is to adjust and adapt to change in the best way possible so that dentists can provide the best care possible for patients moving forward.

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