To: Erika Paterson, Professor
From: Shahd Khudher, Student
Date: June 14, 2021
Subject: Proposal for Enhancing infection control in Ancaster orthodontic office due to COVID-19 pandemic

**Introduction:**Orthodontic offices usually have an open concept clinic set up where all dental chairs are in one big room and practitioners treat patients in the same place. This environment is not functional in situations like the COVID-19 pandemic, where isolation and disinfection need to be on high levels. There is no doubt that public health and the regulated bodies of the dental and dental hygiene professions have strict guidelines and rules for infection control. To protect both employees and patients, prevent contamination and the spread of diseases, the previous guidelines were affected greatly by the COVID-19 pandemic. This proposal will be addressed to Dr. Saunders to implement the changes needed in Ancaster Orthodontic clinic to improve infection control.

 **Statement of the Problem:**In clinical settings, a great deal of attention is given to following the guidelines of infection control. The air quality, in particular is a crucial factor; dental offices and especially orthodontic clinics tend to generate aerosols that could carry viruses and pathogens for several hours. With many diseases that could transmit through contact or air, an open concept clinic is not ideal, however dealing with a highly contagious infection that displayed a high mortality rate throughout the globe, requires stricter steps and updated measures.

**Proposed Solution:**The best solution would be to transform the open-concept clinic into closed operatories or require a different layout for future clinics. Ideally, dental offices should consist of separate closed treatment rooms that are sealable if required. However, the fast pace of the orthodontic clinic imposed the open concept practice. Solutions to the issue in the currently operating clinics would be using sealable partitions, medical air purifiers & reducing the number of individuals in the clinic.

**Scope:**To determine the feasibility of the proposed solutions and transformation of orthodontic clinics to more safe practice during the pandemic, I intend to explore the following areas of scrutiny:

1. What are the current requirements for clinical setup workplace and the updated guidelines?
2. What are the available products that could help the transformation of the clinical space?
3. What is the cost and is it reasonable to transform or maybe move to a new facility?
4. How to implement staff training and plan working timetables to avoid a high number of workers at the same time?
5. Look into forming policies and quality assurance maintenance?

**Research Methods:**

Starting with the updated guidelines from the regulatory bodies and public health, primary data collection should be on par with the requirements and based on recommendations from the official in charge. Conducting surveys and utilize my in-clinic observations. Search for estimates from trusted manufacturers of the needed equipment and ensuring their compatibility. Secondary sources would be evidence-based research papers on the factors behind the requirements so choices will be based on solid grounds. Also, public health and the college of dental hygienists’ publications.

**My Qualifications:**I have been practicing dental hygiene in Ontario for the past 13 years. I have worked in multidisciplinary clinics as a manager, team leader, clinic supervisor and infection control officer. This required me to attend many seminars and training sessions to instill policies and train staff to follow the guidelines. I also volunteered at the Trillium Hospital in Mississauga, Ontario and participated in all the training and continuing education. On a personal level, I have great knowledge of budgeting a business and establishing a facility according to the regulations from my family’s jewelry business where I helped in many aspects. Currently, I am pursuing my bachelor’s degree in dental science at the University of British Columbia, this exposed me to a vast knowledge of assessing and evaluating research as well as evidenced base decision-making process.

**Conclusion**The COVID-19 pandemic reshaped several aspects of our life and affected many practices. Special light was shed on the medical and clinical practice sectors. Updating our practice in orthodontics seems imminent to ensure the safety of clinicians and patients at any cost and in any time. It is clear that a change is needed to avoid jeopardizing the health of the public and minimize any setbacks in the future. Upon your approval, I will start my research immediately.