info@dentalsafetyfirst.com
Albany, OR

Dear Esteemed Colleagues,

As I am sure you are aware, dental procedures create biologically-contaminated aerosols. The following letter is my earnest effort to explain the importance of taking the next step in ensuring the health and safety of our patients and staff.

Dentistry has Inherent Health Risks as a Profession

Dentistry is a uniquely risky profession for multiple reasons. Aside from the obvious risks in terms of radiation exposure, positional repetitive postural diseases, dental procedures create a biological aerosol that is contaminated with potential serious pathogens. These present a real and present danger for dentists, dental hygienists and dental assistants.

Current Protections are not Enough

When faced with providing dental care in the presence of respiratory-transmitted viral diseases like SARS, MERS, or now COVID-19, current protocols for PPE and disinfection are not enough. Best practices are now being reconsidered to include pre-procedural rinses and control of the aerosol at the source. The dental aerosols have been extensively studied, and dental professionals are exposed to aerosols whenever they use an ultrasonic scaler, air polishing device, high speed drill, air-water syringe, air abrasion or even a hard tissue laser.

While using pre-procedural antimicrobial rinses reduces pathogens in the patient's mouth, other current protocols including PPE, high volume evacuation, routine rubber dam use and increased ventilation is insufficient. (There is evidence that rubber dams actually increase the aerosol exposure.) Studies indicate the remaining aerosol still presents a potential serious risk. The best protection comes from controlling the aerosol at the source.

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New Chair-side Extra-Oral Vacuum HEPA Filters can make Dentistry Safe

High volume accessory extra-oral HEPA vacuums control 99.97% of particles in the aerosol down to 0.3 microns by filtering them out. However, most virus particles are smaller than that, and average 0.05-0.300 microns, with SARS virus at 0.120 microns and Influenza at 0.100 microns. The good news is these viruses can be captured extremely efficiently with a HEPA filter, but based on NASA research, it becomes a function of air velocity in the filter. The system must be designed and calibrated to accomplish this. With a proper performing HEPA extra-oral vacuum, the aerosol can be controlled and the virus sized particles captured. The Dental Aerosol Extractor, DAX, (patent pending) is specifically designed and certified to meet these criteria.

I hope the details outlined in this letter provide ample motivation to research the DAX unit available on DentalSafetyFirst.com. I would not share this with you if I did not believe it paramount for us, as dentists, to know and consider as a solution to today's health and safety concerns.

Regards,

Dr. V. Kim Kutsch, DMD
Founder, Dental Safety First