

Are There Any Precautions for Nitrous and Sedation-Related Equipment During COVID-19?

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COVID-19 CONCERNS

- Contagiousness
 - Prolonged close contact
 - Related to airflow
 - Operating rooms particularly vulnerable
- Sequellae of COVID
 - Nothing – Death
 - Reports of mid-long-term disability
- Management during COVID ultimately comes down to risk vs reward probabilities

USE OF NITROUS OXIDE IN DENTISTRY

- Machine is a simple gas partitioning device
 - Open circuit
 - No seals or valves – therefore cannot ascertain unidirectional flow
 - Gases are not recycled
- Patient
 - Mouth open and breathing

RISK FACTORS IN USING NITROUS OXIDE DURING COVID

- To dentist and staff
 - Scavenging
 - Where does suction and ventilation go?
- To patient
 - Source of gas
 - Cross contamination
 - Nasal hood
 - Tubing

- Considerations are not much different from usual practice, but a heightened sense of concern exists based on the COVID risk.

MANAGEMENT COMPARISON vs GENERAL ANESTHESIA

GENERAL ANESTHESIA

- Circle circuit
 - Closed system
 - Valves
 - Gases recycled
 - Heat Moisture Exchange (HME) filter – 99.95%+ filtration
- HME is changed for every case
- Tubing for anesthesia machine changed

RISK MANAGEMENT IN DENTISTRY

- Cannot put a filter in N₂O tubing because adaptors are not compatible, and it is an open circuit – the flow of gas is not one way.
- But can increase the probability of one-way gas flow by increasing fresh gas supply.
- Ensure inner nasal hood piece is sterilized
- Wash/disinfect tubing after use
- Scavenging – connected and not leaking
- Vacuum machine ventilation – well maintained and filters up to date
- Vacuum machine room should be ventilated to outside and consider putting seals around the doors.