

E 3**A survey of hyperbaric chamber cleaning practices**Fitts M¹, Weaver LK^{1,2}, Deru K¹¹ Division of Hyperbaric Medicine Intermountain Medical Center, Murray, UT, and Intermountain LDS Hospital, Salt Lake City, UT; ² University of Utah School of Medicine, Salt Lake City, UT

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*michelle.fitts@imail.org***Introduction/Background**

We surveyed providers and chamber operators to better understand the cleaning frequency and methodologies utilized across the industry.

Materials and Methods

In June 2019 an online survey link was distributed via email to members of the Undersea and Hyperbaric Medical Society and to customers of Sechrist Industries and Fink Engineering. Recipients provided information about how often they cleaned their chambers, the time required for chamber cleaning, the cleaning products used, and the chamber surfaces cleaned. Data was collected anonymously in RedCap.

Results

From 6/10/2019-12/26/2019, 249 respondents provided data about chamber cleaning practices (30 multiplace facilities, 212 monoplace, seven both chamber types). Of 219 facilities with monoplace chambers, 26% cleaned chamber after every session, 9% after select patients (isolation, secretions, etc.), 11% daily, 13% more than once/week, 39% once/week, and 1% twice/month; 99% and 95% cleaned the acrylic and stretcher bed, respectively, while 31% cleaned the gas inlet and 46% the gas exhaust. The most popular acrylic cleaning products were Tor HB (20%), PDI Sani-Cloth AF germicidal wipes (18%), mild detergent (16%), and Ecolab Asepti-HB (14%). The mean cleaning session for those who cleaned after every run was 18 minutes (range 2-120), 36 minutes (5-240) for those who cleaned daily, and 39 minutes (1-180) for those who cleaned weekly.

Of 37 multiplace chamber facilities, 68% cleaned every run, 8% daily, 8% more than once/week, 11% weekly, and 5% monthly. Surfaces cleaned included walls (68%), seating (86%), floors (89%), gas delivery

systems (68%), and patient care devices (78%).

Of 28 respondents with cylindrical multiplace chambers, 21% cleaned below the floor plates weekly, 36% monthly, 18% quarterly, and 18% semi-annually/annually. Respondents estimated their mean daily cleaning time at 41 minutes (range 10-120), and weekly cleaning time at 273 minutes (range 24-1200).

Summary/Conclusion

Cleaning frequency, time burden, and methodology varied widely among respondents to this survey.

E 4**Historic wildfires versus air quality in the hyperbaric environment**

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In September 2020 Oregon experienced the most destructive wildfires in the state's history. During this time Portland held the top spot, with the worst air quality in the world for a couple of days. This posed safety questions for our department, as we have a multiplace hyperbaric chamber that is located outside in a trailer unit. At this time, we had to determine whether it would be safe to continue operations, or if we needed to shut down due to the air quality.

Materials and Methods

Our department shut down for one business day as we determined the safety to continue operations. Points taken into consideration were the smell inside the trailer, the smell inside the equipment room where our compressors are housed, and the smell inside the chamber while under pressure. I started by taking apart the compressors to inspect the components, and to see how they would be affected by smoke. I taped up as many openings to the trailer as possible. I purchased an air quality meter and took readings outside the trailer, inside the trailer, inside the equipment room, and inside the chamber while pressurizing/pressurized as well as monitoring the CO detector that is inside the chamber. Later an air quality analysis was sent to a third-party company to be analyzed.