

Your Everyday Decisions Are More Important Than You Realize

Swab Test Case Study

I was asked to perform an informal case study on dental office evacuation valves. This was a challenge in many ways. Several offices I contacted were leery to allow swab testing in their offices even though they said they felt confident of their disinfection process. My infection control flag went up many times in those practices. If they felt confident, why are they leery of doing a simple swab test? What was the risk to them? One office wanted to check with his lawyer, wanted my license, and much more seeming ridiculous information. The offices that were welcoming wanted to know how they could improve their infection prevention protocol. A big benefit was they received bags of disposable valves for allowing testing of their disinfected valves.



Testing was done to determine if the valves were contaminated even after disinfection. What are the consequences of the unknown invisible organic matter? What pathogens are nesting here? When disinfected what pathogens are being reduced or present?

As an experienced infection prevention and safety specialist, I performed the swab-testing. After reviewing the results, I was glad I had donned the appropriate PPE. Yet maybe I should have worn a hazmat suit!

The Down and Dirty Results

I processed 212 valve surfaces and determined they were **YES** contaminated after a routine disinfecting protocol. Discovering the bacterial load on dental unit vacuum valves left me with an uneasy feeling. Are we creating a healthy environment for our patients? *Occupational Safety, Asepsis and Prevention (OSAP)* has repeatedly stated that dental patients should be in a safe dental environment which includes the entire dental facility and all the processes.

Just to begin to discover where problems happen, the first question should be if the valves were disinfected according to manufacturer's instructions? Metal valve companies recommend *routine* disassembly, scrubbing and reprocessing of the surfaces between patients. Minimal industry standard between patient protocol should be to:

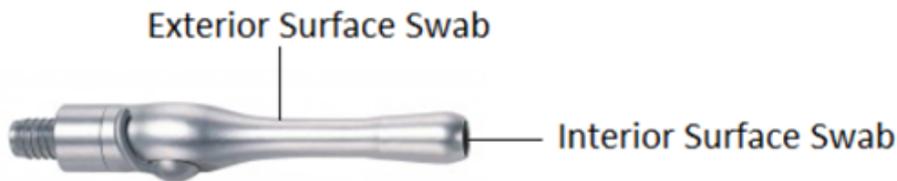
- Wipe once to clean
- Wipe a second time to disinfect

Field Test Results

212 Random Sample Surface Swabs
Timeframe: Measured from Jan 2017 - May 2017

ATP Unit Measure Parameters
0-30 = clean / pass
30+ = unclean / fail

	Average Surface Measure	Total Surfaces that Passed 0-30	Total Surfaces that failed 30+
Interior Surface	5,021	4	102
Exterior Surface	2,289	0	106



Testing Details:

Readings were taken at the beginning of the day or between patients

Measurements were taken on a Hygiena ATP Meter with packaged swabs

212 valve surfaces were tested, 208 failed. These surfaces were considered to be clean by the staff

Exterior cleaning protocol included industry standard wiping between patients

Interior cleaning protocol included industry standard flushing of the evacuation lines daily / weekly

Saliva ejector and Backflow Risks

It's not new information that back flow from low-volume saliva ejectors is happening. Research has shown that when a patient seals their lips around the tip of the saliva ejector, backflow can occur via the pressure created in the patient's mouth. Studies report that gravity pulls fluid back toward patient's mouth when tube positioning is above the patient's mouth or when both high or low suction is used at the same time. Unfortunately, like not going in the water for 30 minutes after eating myth, we have taught our patients to close their lips around the saliva ejector.

The CDC recommends that the dental community advise their patients **not** to close their lips around the saliva ejector. CDC concluded that research confirms the significant risk in backflow with microbial cross contamination between patients.

Is your office using old, outdated operating procedures that are as myth based as watermelon seeds germinating in your stomach? Updated written policies and procedures are a must for any dental setting. Standard Operating Procedures (SOP) can be used for training and OSHA safety purposes. These policies should be reviewed on an annual basis. Check lists are powerful

reminders of what might be forgotten in daily routines. (Go to <http://www.oshatrainingbootcamp.com/> to find checklists and more.)

Replace the Old with the New

Replacing an old car with a new car increases safety with airbags, hands free phone connection and camera's in the rear panel to prevent from hitting a child or running over a bicycle. The prevention is worth every penny. Valves are now available to keep patient's safe in any dental facility. New disposable versions are clean and offer backflow prevention. We need to protect our patients from microbial biohazardous debris and possible transmission of disease via backwash. The Hippocratic Oath and professional ethics standards demand that we *first, do no harm*.

About the Author

Mrs. Pat Pine, RDH is a national and international speaker specializing in OSHA, infection control, lasers and orofacial myology. She brings thirty years of experience in dentistry to provide exciting and evidenced based programs. Pat believes that safety, infection control, and whole health are important to providers and patients alike. Her philosophy is an empowered team is a healthy team, which in turn creates an unstoppable referral formula. Ms. Pine conducts in-office trainings, boot camps, online seminars, and dental/dental hygiene conventions. She is a member of OSAP speaker's/consultant's bureau and publishes regularly in several dental magazines. Pat reminds others that education doesn't stop at clinical treatment. It is an on-going process to enrich ones-self and bring the highest quality of care to patients. Pat can be reached at info@oshatrainingbootcamp.com

