Shedding Light on Cleanliness: Leveraging ATP Testing for Environmental Cleaning and Disinfection Education in the Dental Setting

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OBJECTIVES

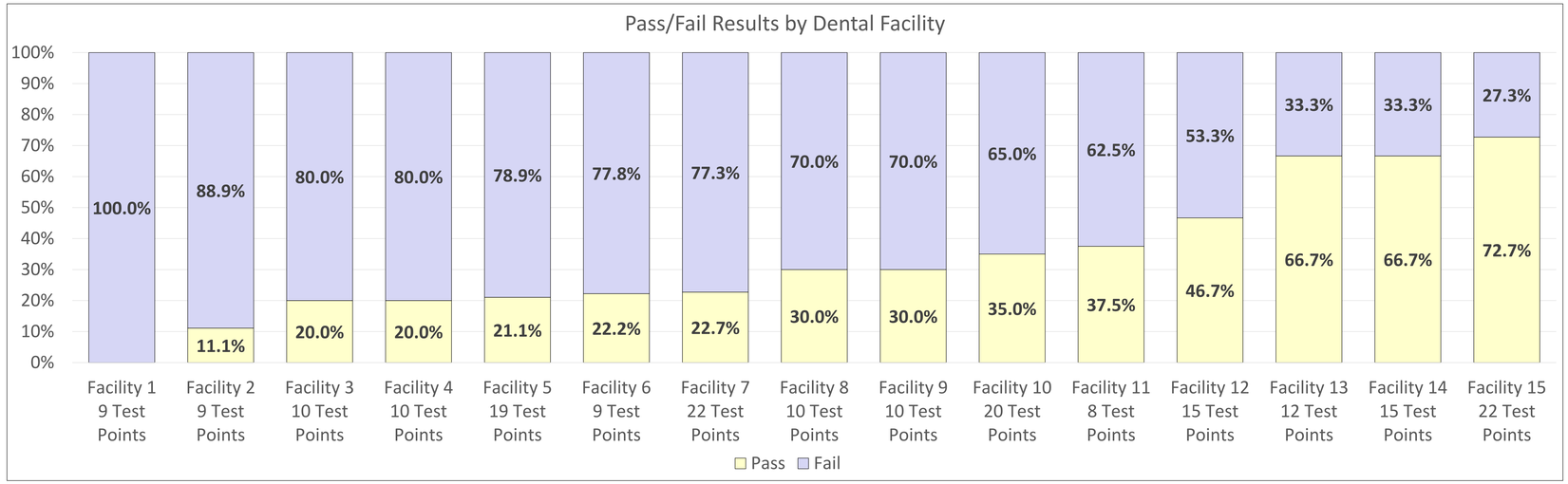
Environmental cleaning and disinfection is a regular practice in the dental setting, but rarely assessed with quantitative testing, such as Adenosine Triphosphate (ATP) testing. The goal of this testing was to increase the understanding of environmental cleaning and disinfection techniques and their impacts on cleanliness in the dental office.

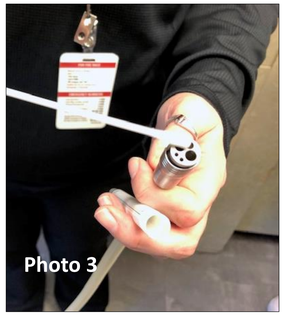
METHODS

Nebraska Infection Control Assessment and Promotion (ICAP) conducted ATP testing in clinics on 7 standard, high-touch, clinical care surfaces. ATP Luminometer readings were gathered and identified as 'clean' or 'dirty' based on the threshold of 250 Relative Light Units (RLU) as set by the manufacturer.

RESULTS

Nebraska ICAP completed ATP testing at 15 of Nebraska's 817 dental facilities from December 2022 to December 2023. The dental facilities that participated in the ATP testing, received immediate results and feedback on environmental cleaning and disinfection. Of surfaces tested more than ten times total, only A/W syringes failed more than half the time (57.3%).



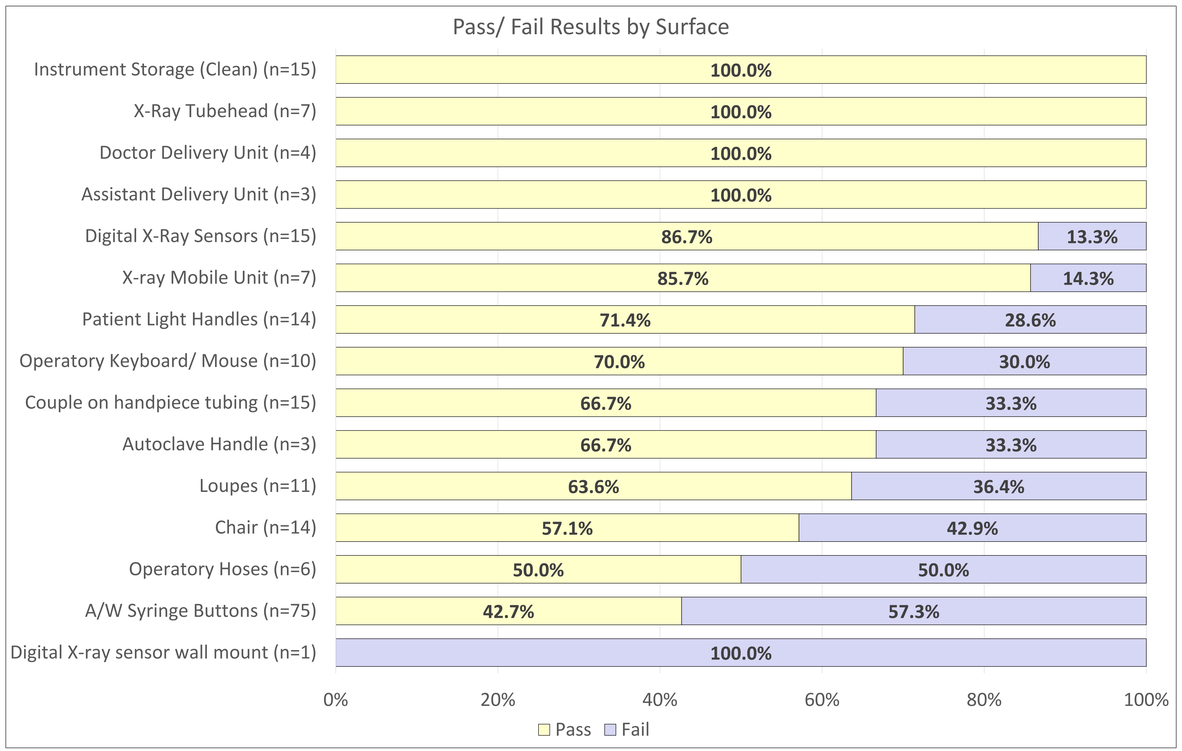


Photos show swabbing of clinical contact surfaces with ATP surface swabs in dental facilities.

Photo 1: Digital X-ray Sensor

Photo 2: A/W Syringe Buttons

Photo 3: Coupler on Handpiece Tubing



INTERVENTIONS AND RECOMMENDATIONS

Barrier use on hard to clean surfaces (e.g. A/W Syringe)	Education on 2-step cleaning/ disinfection process
Implement checklist or standard cleaning/ disinfection process	Reviewing cleaner/ disinfectant manufacturer's instructions for use

CONCLUSIONS

ATP testing allowed the Nebraska ICAP team to better educate facilities on appropriate cleaning and disinfection processes, training and review of standard operating procedures.

DISCLOSURE

Nebraska ICAP is funded by the Nebraska DHHS healthcare-associated infections and antimicrobial resistance program through CDC Epidemiology and Laboratory Capacity (ELC) grant

REFERENCES

Centers for Disease Control and Prevention (CDC). (2016). Summary of Infection Prevention Practices in Dental Settings; Basic Expectations for Safe Care

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