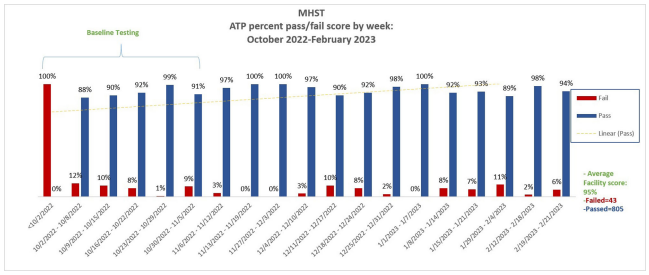

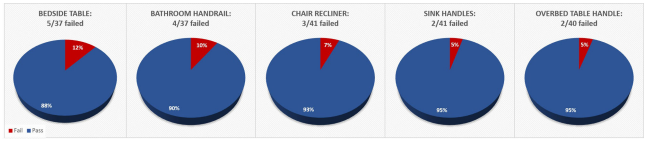

MHST is maintaining a safe and clean environment for patients & staff, MHST implemented a comprehensive cleaning verification program to include adenosine triphosphate (ATP) technology. We aimed to establish the program with baseline readings, and an overall weekly passing score of 95% for all tested inpatient rooms. **Methods:** To achieve sustained improvement, we needed to monitor, educate, and have periodic performance feedback to individuals and stakeholders. Key stakeholders (IP, EVS, Operations Leadership, Nursing Leadership representative) were identified, and a weekly meeting was established to discuss the planning and implementation of the ATP program. Some key actions included: standardization of brand of luminometer- device to measure ATP for microbial contamination; establishment of 16 high surface touch points to be tested; partnership with IT to create a database & dashboard for ATP results & data analysis; training of ATP device to all personnel who will be utilizing ATP device; establishment of a threshold for a "pass" clean (relative light unit [RLU] less than or equal to 45). Summary of **Results:** After baseline testing, the average weekly pass score met goal at 95 percent for all tested rooms. The bedside table located on the 2W floor was the location that failed the most (3 instances). **Conclusions:** Our program implementation project aimed to improve terminal cleaning validation utilizing ATP technology in inpatient rooms, was successfully implemented. Equipped with quantitative results, the MHST team, was able to verify cleaning quickly and efficiently without any confusion, as it may have been with the previous verification method of fluorescent marking. The partnership between Infection Prevention (IP) & Environmental Services (EVS) was crucial in the implementation of this process improvement- from participating in training together to understanding and sharing ATP pass/fail score data.

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Subject Category: Environmental Cleaning

Environmental Contamination in Relation to cDHP in Candida auris Patient Rooms as Measured by ATPase

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Background: Candida auris (CA) is an urgent threat per Centers for Disease Control and Prevention with rapidly increasing cases across the US. Patient rooms recontaminate with CA within hours after daily cleaning due to skin shedding, persistence on environmental surfaces and resistance to commonly used disinfectants. Continuous dry hydrogen peroxide (cDHP) is a novel environmental technology augmenting daily room disinfection. cDHP reduces CA organism counts based on environmental cultures. Adenosine triphosphatase (ATPase) testing offers rapid results to monitor surface cleanliness. ATPase Testing Protocol: Upon identification of CA, cDHP was activated in the patient's room. ATPase surface testing was performed in rooms of CA infected inpatients and nearby control rooms of inpatients without CA and thus no cDHP. Group A surfaces near the patient were nurse call handheld devices and/or bed rail. Group B surfaces were horizontal counter and/or computer keyboard, located >3 feet away from the patient. ATPase testing was to occur within one hour of daily room disinfection for CA patient Day0 (day of cDHP activation), Day1, Day7 and Day14 and controls. Daily room disinfection using quaternary disinfectants was replaced with EPA Class P chemicals upon CA identification. Nursing spot disinfects with Class P ready to use disinfectant wipes in all rooms. **Results:** Testing occurred among 13 CA and 22 control patients in 5 hospitals. In Table 1, pass rates are displayed by cumulative (Day0+1+7+14) test days for surfaces and patient room groups. Analysis applied Pearson's Chi-squared test with Yates' continuity correction. **Conclusions:** Surfaces further from the patient in rooms of CA patients exposed to cDHP had higher ATPase pass rates than controls. Surfaces close to the patient have a high ATPase failure rate, regardless of CA or cDHP. Strategies are needed to ensure disinfection occurs on high touch surfaces near patients. cDHP may have value in supplementing room disinfection. Contributing failure factors include surfaces missed for disinfection, delays in timely testing and known limitations with ATPase methods.

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Mitigating SSIs: focus on physical operation rooms environmental factors

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Background: Surgical site infections (SSIs) are associated with increased morbidity, monetary loss and mortality. The physical aspects of the operation room (OR) including airflow, humidity, pressure, and particulate counts are essential part of SSI prevention. Humidity control is vital to avoid static electricity buildup.Temperature control helps prevent hypothermia. Limiting OR traffic and door opening are essential to prevent airflow disturbance and minimze particles in OR environment. We have recently studied electronic monitoring of OR traffic and the traffic was higher than what was expected. Our aim was to evaluate our real-life measurement of these OR parameters as part of SSI prevention bundle. **Methods:** This is a prospective study focused on the OR physical environmental factors as part of operative SSI prevention bundle. The study was conducted for 4 weeks at an academic medical center. The study was conducted in two different generations of OR for neurosurgical and ophthalmologic procedures. We performed direct observation of OR traffic as well as environmental parameters (temperature, humidity, pressure, and particulate count) for the entire length of the procedure. We used both directly measured data as well as automated data generated by facilities. **Results:** The study showed that temperature, humidity, and pressure wer tightly controlled in the OR. This observation was consistent between manual data and automatically generated data. The OR traffic was not easily monitored by the current automatic data and was measured by direct observation. The correlations between particulate count and OR traffic was strongest for 0.3μm (0.7370, and weakest for 1.0μm (0.087). The 5.0μm particulate size had a moderate positive correlation of 0.344, Additionally, shorter procedures had less particulate matter in the OR environment. Automated data were only available in the new ORs but could not predict traffic without automated door monitors. But the automated data could easily portray