

Table 3. Outcomes among patients hospitalized with mpox

	Overall cohort N=65	Admitted for mpox medical indication N=57	Admitted for mpox isolation N=8	p-value ^a
Total number of hospital admissions	80	72	8	-
Number of hospital admissions per patient, median (IQR)	1 (1-1)	1 (1-1)	1 (1-1)	0.18 ^b
Cumulative length of stay per patient in days, median (IQR)	4 (2-10)	4 (2-10)	6 (3-9)	0.69 ^b
Significant complications				
Secondary bacterial infections	40 (62%)	38 (67%)	2 (25%)	0.02
All-cause ICU admissions ^c	8 (12%)	8 (14%)	0 (0%)	0.26
Cumulative length of stay for patients in ICU (N=8)	4 (2-41)	4 (2-41)	0	N/A ^d
In-hospital death	3 (5%)	3 (5%)	0 (0%)	N/A ^d
Treatments received				
Tecovirimat	40 (62%)	37 (65%)	3 (38%)	0.14
Antibiotics	49 (75%)	47 (82%)	2 (25%)	<.01

^aPearson's chi-squared test, unless otherwise specified.
^bWilcoxon ranked sum test.
^cOf the eight patients admitted to the ICU, five (63%) had an ICU indication (mechanical ventilation, need for pressor support, or need for renal replacement therapy).
^dp-value is N/A due to insufficient number of patients for analysis.

Sixty-five patients were hospitalized for mpox, with 8 (12%) admitted primarily for infection control isolation (Table 1). Median age was 35 years (IQR=31-40), 69% were cisgender men, and 38% were Black. Those hospitalized primarily for isolation were more likely to reside in a homeless shelter (50% vs. 9%, $p < 0.01$) and less likely to have a private residence (25% vs. 81%, $p < 0.01$) than those hospitalized for medical indications. Those hospitalized for medical indications were more likely to have HIV (63% vs. 25%, $p=0.04$), secondary bacterial infections (67% vs. 25%, $p=0.02$), and to receive antibiotics (82% vs. 25%, $p < 0.01$) (Tables 2 and 3). There was no significant difference in median cumulative length of stay per patient ($p=0.69$) between those hospitalized for medical versus isolation purposes. Most admissions for medical indications were for soft tissue superinfection (40%), severe pharyngitis and/or proctitis (28%) and pain management (20%). There was no significant difference in the proportion of tecovirimat receipt (65% vs. 38%, $p=0.14$) between those hospitalized for medical versus isolation purposes. **Conclusion:** Infection control isolation accounted for a significant proportion (12%) of mpox hospitalizations and was associated with a similar median length of stay per patient as hospitalization for medical indications. Our small cohort limits statistical power for comparison between groups. However, our findings argue for increased community-based isolation capacity. This may reduce unnecessary hospitalizations during future outbreaks, particularly amongst unsheltered individuals or those living in congregate settings.

Disclosure: Madeline DiLorenzo: Stocks - Abbvie, Amgen Inc., Becton Dickinson, Biogen Inc., Bristol Myers and Squibb, CVS Health, Davita Inc., Elevance Health, Gilead, Henry Schein, Hologic Inc., Humana Inc., Jazz Pharmaceuticals, Laboratory Corp, Merck and Co., Quest Diagnostics, ResMed Inc., Teladoc Health, Vertex Pharmaceuticals, West Pharmaceuticals

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Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Emerging Pathogens
Building a Special Pathogen Response Center from the Ground Up
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North Carolina at Chapel Hill and William Fischer, University of North Carolina at Chapel Hill

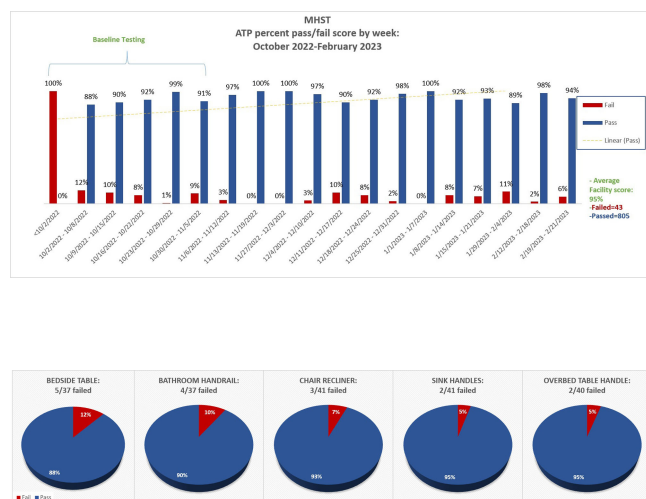
Background: In September 2022, UNC Hospitals was awarded a Regional Emerging Special Pathogens Treatment Center (RESPTC) grant by the U.S. Department of Health and Human Services Administration for Strategic Preparedness and Response (ASPR) to care for up to two patients with viral hemorrhagic fever, or similar pathogen, and up to ten patients with novel respiratory pathogens. Intensive infection prevention efforts and timely multidisciplinary commitment was required to develop the Space, Strategy, Staff, and Stuff needed to care for patients with a special pathogen. **Methods:** Multiple space needs assessments were undertaken to acquire spaces for the care of patients, simulation training, and a dedicated laboratory. Strategies for developing the response plan required collaboration with hospital executives, nursing leadership, public health leaders, and regional partners. Staff were recruited across various disciplines to join the response team and were provided hands-on skills training which was assessed by post-training surveys. Specialized ‘stuff’ (i.e., PPE, training equipment, and waste management devices) were researched and procured for use by the team. **Results:** Patient care and dedicated laboratory space was identified within existing infrastructure, and renovation plans were developed to adapt the space for these specialized activities. A waste management plan that benefits the hospital for routine waste and allows for Category A waste management was approved. Fifty-three staff members were recruited from 3 main disciplines (RNs, MDs, Paramedics), and across numerous settings (Medicine Acute Care & ICU, Pediatric ICU & Stepdown, Air Care/Transport, Burn ICU, Surgery Stepdown, Emergency Medicine, Infection Prevention, Infectious Disease) were trained during five 4-hour training sessions, culminating in an exercise involving transporting a rule-out Ebola patient to the hospital’s special pathogens unit. Post-training evaluations demonstrated a very high level of confidence (‘strongly agree’) in staffs’ knowledge about the RESPTC site (92.3%), special pathogens (80.8%), collaboration needed for managing patient care (80.8%), and in their comfort with special PPE donning and doffing (73.1%). **Conclusions:** Using a systematic approach to develop Space, Strategy, Staff, and Stuff, a large academic hospital readied itself to become a new RESPTC site. Key lessons learned include the importance of a multidisciplinary response team; local, state, and regional coordination for care planning and delivery; and early community partnership development. Logistical infrastructure and waste management challenges continue to require partnership with hospital leadership to optimize workflows and patient care. Holistic decision-making around infrastructure has led to changes that benefit all hospital patients and offer efficiencies to

Disclosure: William Fischer: Consultant - Roche, Merck, Inhalon Biopharma; Speaker for ACGME - IMG. David J Weber: Consultant on vaccines: Pfizer; DSMB chair: GSK; Consultant on disinfection: BD, GAMA, PDI, Germitec

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Improving Cleaning Validation Utilizing Adenosine Triphosphate Technology
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Background: Thorough cleaning and disinfection of high-touch surface areas in hospital inpatient rooms remain vital parts of effective strategies in reducing hospital-acquired infections (HAIs). Currently, Methodist Specialty & Transplant Hospital (MHST) inconsistently utilizes fluorescent marking for terminal cleaning validation. Without quantitative results, it’s difficult to measure the effectiveness of cleaning. To ensure



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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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 minimize 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 were 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