

This method allows IPs to be introduced to concepts covered in the board certification exam upon hire and support certification with improved outcome

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#### Presentation Type:

Poster Presentation - Poster Presentation

**Subject Category:** Leadership

#### System infection prevention in hospital networks – a SHEA research network survey

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**Background:** Hospitals are increasingly consolidating into networks and integrating infection prevention (IP) into system infection prevention programs (SIPP). Very little has been published about these programs. This survey sheds light on the current state of SIPPs. **Methods:** We used the survey generator Alchemer.com for setting up the questionnaire, and tested a beta version among peers. The final version was sent out to SHEA Research Network participants in August 2023. Raw data was compiled and analyzed. **Results:** Forty institutions responded (40/104, 38%), of which 25 (63%) had SIPPs. These SIPPs reported health systems with a median of 4.5 acute care hospitals (range, 1-33); 16 SIPPs reported a median of 2 critical access hospitals (range, 1-8); 4 SIPPs reported 1-3 LTACHs, and 6 SIPPs reported a median of 1.5 nursing homes. All except 3 (88%) contained an academic center; 48% (11/23) of the U.S. based programs operate in multiple states. Four programs have been in place >20 years, four < 2 years, and the remainder a median of 8 years (range, 2-18). Physician directors also have clinical (20/25, 80%), teaching (19/25, 76%), research (15/25, 60%), antimicrobial stewardship (8/25, 32%), quality (8/25, 32%), and/or patient safety (5/25, 20%) roles. Seventeen (68%) report having a written job description. Nineteen (76%) report having an infection preventionist in a system IP director role; only 7/25 (28%) have a dedicated system IP team that operates independent of individual hospitals. Sixteen (64%) report administrative support, 10/25 (40%) have a data manager/analyst, and 4/25 (16%) include IT expert or programmer support. 15/25 (60%) report having done a formal system-wide IP needs assessment. While 16/25 (64%) have some automation in HAI surveillance (predominantly using Buggy [Epic] or Theradoc [Premier]), while only 5/25 (20%) run fully automated surveillance. 10/25 (40%) have implemented centralized surveillance. 12/25 (48%) have “system IP policies” that are hierarchically above individual site policies. The biggest challenges appear to be gaps in 1) clear governing structure, 2) communication, 3) consistent staffing, 4) data management support, and 5) dedicated, empowered IP expert FTEs. **Conclusions:** To our knowledge, this is the first U.S. survey to explore present-day system infection prevention. In this sample of hospital networks, we found heterogeneity in the structure, staffing and resources for system IP with significant opportunities for improvement. In this era of healthcare consolidation, our findings highlight the urgent need to more clearly delineate and support system IP needs in order to enhance their functionality.

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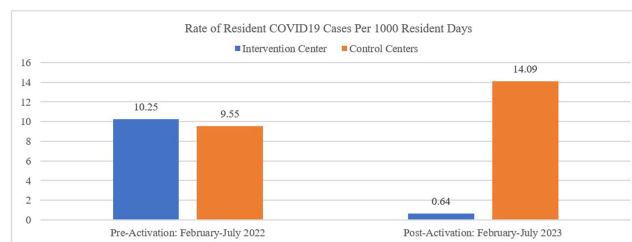
Poster Presentation - Poster Presentation

**Subject Category:** Long Term Care

#### Sustained Microbial Burden Reduction and Impact on Covid19 Cases in Long-Term Care Facility through Advanced Photocatalysis

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Figure 1



**Background:** COVID19 remains deadly to Americans over 75 years old despite vaccination and additional infection control practices in long term care (LTC). The evolution of more transmissible COVID19 variants and continued viral aerosols result in persistent COVID19 outbreaks in LTC during high community levels of COVID19. Despite the end of pandemic Federal support and the continued vulnerability of elderly to the virus, LTC facilities remain dedicated to protecting this vulnerable population. The study hypothesized that utilization of continuous, facility-wide, advanced photocatalysis (AP) disinfection technology will reduce microbial burden in air and on surfaces, demonstrating a decrease in infectious aerosols and subsequent COVID19 cases among residents and workers. **Methods:** A prospective facility controlled experimental study was performed in skilled nursing facilities in Pennsylvania and New Jersey from January 2023 to April 2023 to surveil aerobic bacterial and fungal colony forming units (CFUs) in air, and Methicillin-resistant Staphylococcus aureus (MRSA) and fungal CFUs on surfaces and floors prior to and post AP technology installation. Impacts on resident COVID19 cases were recorded and compared to the same extended observation period (February-July 2023) one year prior (2022) with similar year over year community COVID19 rates. In addition, two matched control centers in regional proximity to the intervention facility were also prospectively studied. A one-way analysis of variance (ANOVA) was used to analyze mean microbial burdens after each post activation period (significance  $p < .05$ ). **Results:** From baseline to final testing, the intervention facility surface testing showed a 93% reduction in mean aerobic bacterial CFUs ( $p = .002$ ); 96% reduction in mean fungal CFUs ( $p < .001$ ); 97% reduction in mean MRSA CFUs ( $p < .001$ ). Floor testing also showed reductions in mean CFUs for aerobic bacteria by 92% ( $p < .001$ ); 96% for fungi ( $p < .001$ ); 99% for MRSA ( $p < .001$ ). Air testing showed reductions in mean CFUs for aerobic bacteria by 87% ( $p = .005$ ); 36% for fungal ( $p = .005$ ). The intervention facility observed a 94% reduction in resident COVID19 cases compared to the matched control facilities that increased 46% during the 2023 time period (Figure 1). **Conclusion:** This study is on the pioneering edge of demonstrating that continuous and persistent disinfection technology reduces contaminant reservoirs on surfaces, floors, and air and clearly decreases infectious aerosols and improves resident outcomes by dramatically reducing COVID19 transmission in LTC facilities.

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**Subject Category:** Long Term Care

#### Healthcare Personnel Interactions with Floors and Pathogen Transmission in Long-Term Care: A Qualitative Exploration

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**Background:** We know relatively little about how healthcare personnel (HCP) in long-term care facilities (LTCFs) integrate hand hygiene (HH) and personal protective equipment (PPE; e.g., gloves) use into their care