

monitoring within 1 month of starting the study. However, the mean time required to implement direct observation of hand hygiene practices was 24.7 (± 19.1) months. There was a significant increase in ABHR consumption in large and middle-to-small-scale acute-care facilities ($P < .0001$) after implementing the direct observation. However, there was not a significant increase for ABHR consumption in non-acute-care facilities ($P = .14$). Multivariable regression analysis showed that the hospital ward type, duration of ABHR consumption monitoring, and duration of direct observation of hand hygiene practices were independently associated with ABHR consumption. **Conclusions:** ABHR consumption increased in all facilities that implemented direct observation, but the change was not statistically significant in non-acute-care facilities. The generalized linear mixed model analysis showed significant associations between ABHR consumption and hospital ward type and time to monitoring of ABHR consumption and direct observation of hand hygiene practices. Direct observation of hand hygiene practices should be implemented more widely. The effect of intervention intensity should be evaluated in future studies.

Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S2):s72–s73

doi:10.1017/ash.2023.322

Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: Implementation Science

Factors associated with high influenza vaccination among healthcare workers in Tennessee acute-care hospitals, 2014–2022

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Background: Healthcare workers (HCWs) are at increased risk of influenza exposure and represent a potential transmission source. The Department of Health and Human Services (HHS) set a goal for 2020 to have 90% of all HCWs in acute-care hospitals (ACHs) vaccinated. Vaccination against influenza decreases symptomatic illness and absenteeism and protects HCWs and their contacts. We assessed characteristics of facility intervention programs based on their success in meeting this benchmark. **Methods:** Data from the NHSN were utilized, including answers to the Annual Flu Survey for 2014–2022 and the rate of vaccine compliance by facility. Flu surveys detail facility-specific programs implemented for each influenza season, from October to March. We used SAS version 9.4 software for univariate analyses to determine factors significantly associated with meeting the HHS benchmark target of $\geq 90\%$ vaccination among all HCWs, split into categories for employees, students or volunteers, and licensed independent practitioners. Facilities were excluded if they were not ACHs or Critical Access Hospitals (CAH), did not complete the Annual Flu Survey for at least 1 year, or required vaccination as a condition of employment. **Results:** From 2014 to 2022, 745 surveys were completed. Overall, 48.58% of respondents succeeded in meeting the HHS benchmark. Also, 306 surveys completed noted that their facility did not require influenza vaccination. Among those, only 19.93% respondents succeeded. Moreover, 80.33% of successful respondents for all HCWs required personal protective equipment (PPE) upon vaccination refusal compared to 34.29% of unsuccessful respondents ($P < .0001$). Furthermore, 98.36% successful respondents required documentation of offsite vaccination, compared to 89.39% of unsuccessful respondents ($P = .027$). For employees, 64.56% of successful respondents tracked vaccination rates in some or all units compared to 45.81% of unsuccessful respondents ($P = .004$). Also, 63.29% successful respondents had visible vaccination of leadership, compared to 43.61% of unsuccessful respondents ($P = .003$). Furthermore, 86.08% of successful respondents had mobile vaccination carts, compared to 73.57% unsuccessful respondents

($P = .023$). For the student- or volunteer-specific benchmark, 24.59% of successful respondents provided vaccination incentives compared to 14.63% of unsuccessful respondents ($P = .035$). **Conclusions:** Facilities with $\geq 90\%$ vaccination among HCWs were more likely to require PPE after vaccination refusal and documentation for offsite vaccination. Other strategies for vaccination were differentially associated by employee type for Tennessee facilities. For future outreach, a multipronged approach is more likely to be successful in addressing vaccine uptake among employees with lagging rates. Strategies for influenza vaccine uptake could also improve other occupational vaccinations. More research is needed on the barriers to vaccination among HCWs specifically.

Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S2):s73

doi:10.1017/ash.2023.323

Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: Implementation Science

Exploring the relationship between the reduction of floor microbial burden and the impact on healthcare-associated infections

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Background: Healthcare floors are a vehicle and/or source for potential pathogens that cause healthcare associated infections, and hospital floors are often heavily contaminated with pathogens such as *Clostridioides difficile* and methicillin-resistant *Staphylococcus aureus*. However, definitive research linking reductions in floor burden to reductions in HAIs has not yet been established. We sought to evaluate emerging technology for continuous disinfection and its potential impact on HAIs. This study was designed to explore the potential relationship between the reduction of microbial burden of floors and healthcare associated infections. **Methods:** A prospective study was conducted in a 22-bed medical-surgical intensive care unit in a 180-bed suburban hospital near New Orleans, Louisiana, from November 2021 to June 2022. Using sterile, premoistened sponges, samples were collected from the floors of 10 areas throughout the unit including 2 nurses' stations, the physician charting area, and 7 patient rooms. The advanced photocatalytic oxidation (aPCO) equipment was then installed in the HVAC ductwork throughout the ICU and activated. Environmental surface sampling of the same floor surfaces was then repeated every 4 weeks for the first 5 months of the study. HAIs were also tracked throughout the entire study period. The facility's normal cleaning floor protocols using a neutralizing floor cleaner were unchanged and followed during the study. Changes in surface burden were calculated using a repeated-methods ANOVA with post hoc analyses as appropriate. Rates of healthcare associated infections were compared using χ^2 analyses. **Results:** Overall, there was a 99.6% statistically significant decrease in floor environmental surface burden from the baseline to the final postactivation test (Fig. 1). The average colony forming unit count (CFU) decreased from 318,850 CFU per 100 cm² to just 2,988 CFU per 100 cm². The unit also saw a statistically significant decrease in publicly reported healthcare associated infections (HO-MRSA, CLABSI, HO-CDI) during the study period compared to the same period a year prior and in the 6 months immediately prior to the beginning of the study (Fig. 2). **Conclusions:** Advanced photocatalytic oxidation technology resulted in a reduction of microbial burden on the floors of a high-traffic intensive care unit. Statistically significant decreases in healthcare-associated infections was also seen. This study highlights a novel aPCO technology and its efficacy at reducing microbial burden and healthcare-associated infections despite no change in practice.

Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2023;3(Suppl. S2):s73

doi:10.1017/ash.2023.324