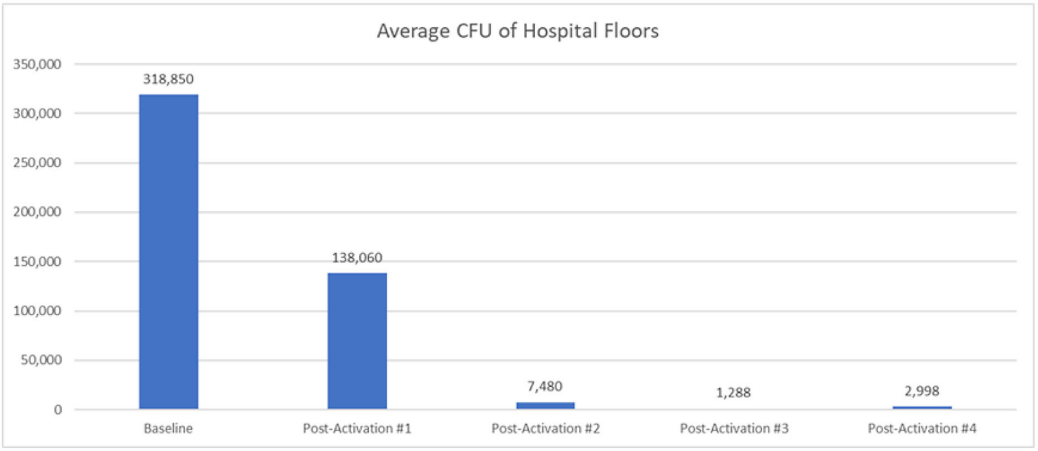

	Baseline Periods			Study Period							
	11/2019 - 02/2020	11/2020 - 02/2021	05/2021 - 10/2021	21-Dec	Jan - 22	22-Feb	22-Mar	22-Apr	22-May	22-Jun	Total Trial Period
Patient Days	1,368	1,676	2,891	459	567	464	382	406	392	353	3,023
MRSA Infections	1	8	8	0	0	0	0	0	0	0	0
MRSA Infection Rate	0.08	0.67	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C diff Infections	1	5	4	0	0	0	0	0	0	0	0
C. diff Infection Rates	0.09	0.46	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CLABSI Infections	0	0	2	0	0	0	0	0	0	0	0
CLABSI Infection Rate	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Implementation Science
Comparison of a standard environmental surface sampling method and a composite approach for select healthcare pathogens
Monica Chan; Judith Noble-Wang and Laura Rose

Background: Hospital surfaces are known to contribute to the spread of healthcare-associated infections (HAIs). Environmental sampling is often performed to locate a reservoir or to evaluate intervention strategies in healthcare facilities. Composite sampling is commonly practiced in other fields of environmental sampling and involves collection of multiple samples combined entirely or partially to form a new sample. We compared a standard CDC surface whole-tool sampling method with a composite sampling approach. **Methods:** *Acinetobacter baumannii* (AB), *Klebsiella pneumoniae* that produce *K. pneumoniae* carbapenemase (KPC), vancomycin-resistant *Enterococcus faecalis* (VRE), methicillin-resistant *Staphylococcus aureus* (MRSA), and *Clostridioides difficile* spores were suspended in an artificial soil and deposited as 40 µL droplets (~104 CFU total) onto steel coupons of surface areas 323 cm^2, 645 cm^2, or 1,290 cm^2 and dried for 2 hours. The surfaces were sampled with a single pass of a cellulose sponge—either the larger side of the sponge (face) or the smaller side of the sponge (edge)—and the optimal surface area was determined. Recovery from the optimal surface area with a single pass sampling was compared to the recovery using a standard CDC method in which all sides were used (ie, whole-tool method) to sample a standard area (645 cm^2). Recovery was determined by culture and total CFU were determined for each optimal surface area. Theoretical composites were constructed using the mean total CFU of optimal surface area; 2×((face) + (edge)). Significance was set at $P \leq .05$. **Results:** Total CFU recovery using the whole-tool method was significantly greater than the single pass sample recovery for MRSA (18,300 vs 16,600 CFU) and VRE (27,600 vs 26,400 CFU) ($P < .05$). When comparing the theoretical composite method to the standard whole-tool area (625 cm^2), the theoretical composite total CFU was significantly greater than the whole-tool method for all organisms. For example, VRE recovery with the standard CDC whole-tool method was 27,600 CFU from 625 cm^2, yet a theoretical composite approach recovered 79,800 CFU from an area of 1,290 cm^2. **Conclusions:** Many factors influence recovery when sampling the environment, and composite sampling is a promising approach when sampling large surface areas. Using a theoretical composite of single-pass samples, the potential for improved detection with composite sampling was demonstrated. A composite sampling approach will reduce time and resources for sampling and sample processing, allowing larger surface areas to be investigated which will improve infection control strategies.
Disclosures: None

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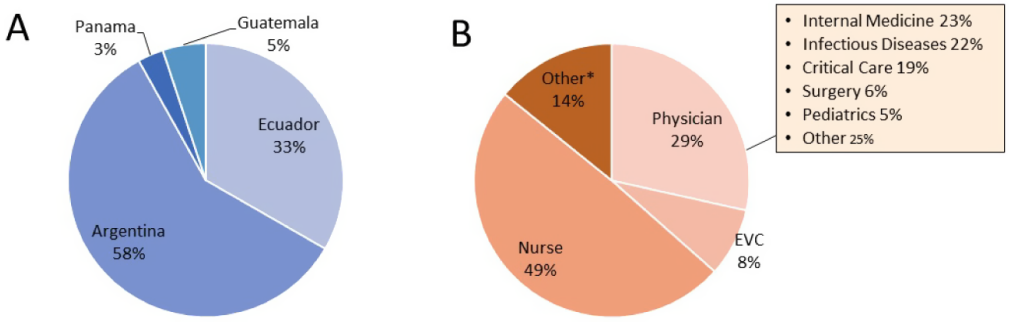
doi:10.1017/ash.2023.325

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Infection Control in Low and Middle-Income Countries
Infection prevention and control perspective and practices among healthcare workers in Bangladesh: A multicenter cross section
Md. Golam Dostogir Harun; Shariful Amin Sumon; Aninda Rahman; Md Mahabub Ul Anwar and Md. Saiful Islam

Background: Infection prevention and control (IPC) is a critical feature of preventing the spread of healthcare-associated infections (HAIs) in hospitals. IPC practices are particularly important in resource-constrained and crowded hospital settings. The successful implementation of infection prevention measures depends on healthcare worker (HCW) knowledge of, attitude toward, and practice (KAP) of IPC. In this project, we assessed the KAP of HCWs and identified factors associated with IPC compliance at tertiary-care hospitals in Bangladesh. **Methods:** From September 2020 to January 2021, we conducted this hospital-based cross-sectional assessment at 11 tertiary-care hospitals. A semistructured questionnaire was used to conduct face-to-face interviews with physicians, nurses, and cleaning staff who were directly involved in patient care. Based on >75% of the total score, each KAP component was divided into adequate knowledge, favorable attitude, and safe practice. We performed descriptive analysis and multivariate logistic regression to determine the KAP score and associated

Figure 1: Distribution of participants by country (A) and role and specialty (B).



*Transport, administration, nutrition, physical therapy, occupational therapy, respiratory therapy, radiology technician, microbiologist.

factors influencing IPC compliance in hospital settings. **Results:** In total, 1,728 HCWs were interviewed; 76.8% of the participants had adequate knowledge on IPC and 54.6% reported safe practices. However, only 16.2% of HCWs had a favorable attitude toward IPC. Among the 3 HCW groups, nurses had the highest KAP scores (76.07±12.7) followed by physicians (69.8±16.2), and cleaning staff (34.4±27.3). Only 29.2% of HCWs reported having received IPC training, and they cited heavy workload as a barrier to IPC guideline adherence. HCWs having adequate knowledge showed 9 times higher odds of safe IPC practice (AOR, 9.36; 95% CI, 5.47–16.04). HCWs who had a favorable attitude toward IPC were 16 times as likely to perform safe practice toward IPC activities (AOR, 15.5; 95% CI, 10.27–23.42). **Conclusions:** Knowledge of safe practices and having a favorable attitude toward IPC are key components of a successful IPC program. Significant improvements are required among all levels of HCWs in Bangladesh tertiary-care hospitals, especially cleaning staff. Educational interventions to train on IPC guidelines, plus monitoring, could improve HCW safe practices.

Disclosures: None

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Presentation Type:
Poster Presentation - Poster Presentation

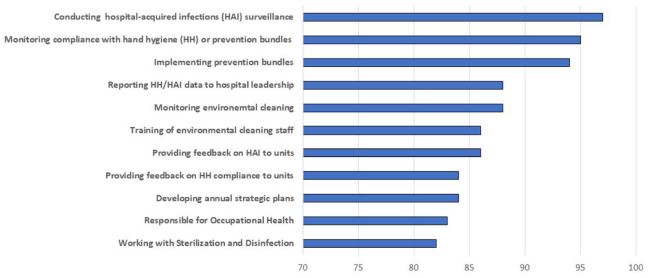
Subject Category: Infection Control in Low- and Middle-Income Countries

Healthcare worker perceptions about infection prevention and control processes and practices in Latin America

Valeria Fabre; Pilar Beccar-Varela; Carolyn Herzig; Guadalupe Reyes-Morales; Clare Rock and Rodolfo Quiros

Background: The burden of hospital-associated infections (HAIs) and antimicrobial resistance (AMR) in Latin America is high. Improving engagement by healthcare workers (HCWs) in infection prevention and control (IPC) may lead to better patient outcomes; however, little is known about HCW perceptions of IPC in the region. We sought to understand HCW perceptions of IPC processes and practices. **Methods:** During August–September 2022, HCWs from 30 hospitals with IPC programs in 4 Latin American countries (Panama, Guatemala, Ecuador, and Argentina) were invited to participate in an electronic, voluntary, anonymous survey about their perceptions of IPC at their hospitals. Physicians, nurses, and environmental care (EVC) personnel were prioritized for recruitment. All respondents were asked 18 questions; IPC team members were asked 5 additional questions about specific activities implemented by IPC programs, how data are used, and how IPC could be improved. Answers with 5-point Likert scale responses were categorized into 2 groups

Figure 2: Activities IPC team members report always or almost always performing (n=181)



(eg, strongly agree or agree vs neutral, disagree, or strongly disagree) for analysis. **Results:** Of 1,252 HCWs who completed the survey, 181 (14%) were IPC team members, 1,095 (87%) had direct patient contact, and 1,156 (92%) worked >20 hours per week. Figure 1 shows participant characteristics. Most participants (56%) rated their IPC program as very good, 38% rated it as good, and 6% rated it as bad. Physicians were less likely to give a favorable rating. Compliance with prevention bundles and hand hygiene (HH) by colleagues was rated as poor by 28% and 22% of HCWs, respectively; however, only 11% and 5% indicated that their own compliance was poor, respectively. Also, 25% of participants reported not receiving or only occasionally receiving HH compliance data. Similarly, 41% of participants reported not receiving HAI data on a regular basis, and 19% of IPC nurses reported not receiving data despite being responsible for conducting surveillance. Furthermore, 41% of respondents indicated not receiving or only occasionally receiving IPC training or education relevant to their role. When asked about the safety climate, 16% of participants reported not feeling appreciated. In addition, 22% of IPC nurses and 37% of individuals in the "other" category (eg, health technicians and therapists) were more likely to report this. When IPC team members were asked how frequently specific activities were conducted (Fig. 2), several opportunities for improvement were identified, including improving HCW access to HH data and development of strategic plans. **Conclusions:** Improving HCW access to training on IPC and to data on HAI burden and compliance with HH and prevention bundles should be emphasized in Latin American hospitals.

Disclosures: None

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