HO-MDRO rate per 1000 patient-days was assessed using mixed-effects Poisson regression using rate ratios (RR), which accounts for unobserved heterogeneity between units while controlling for number of tests ordered per month per hospital unit. HH adherence was stratified in quartiles (Q1: 24-43%, Q2: 43-51%, Q3: 52-61%, Q4: 61-84%). **Results:** During the study period, there were 23 million HH opportunities and 1875 MDROs in 772,930 patient-days. HH adherence increased from 41% January 2021 to 57% September 2022. ESBL, MSSA, and CDIFF accounted for most MDROs (Figure 1). The mean monthly HH adherence rate was 52% per unit, with a median of 1.66 (IQR: 0-3.5) MDROs/1000 patient-days. Mixed-effects Poisson regression suggested no significant overall relationship between HH adherence and MDRO rate (Figure 2). A close to null association was observed when comparing quartile two to quartile one (RR: 0.97, 95% CI: 0.82, 1.15), quartile three to quartile one (RR: 0.96, 95% CI: 0.79, 1.17), and quartile four to quartile one (RR: 1.05, 95% CI: 0.86, 1.28). Results were similar across hospitals (Figure 3). **Conclusions:** Although implementing an EHHMS led to an improvement in HH adherence, we were not able to demonstrate a resultant decrease in HO-MDROs. Potential explanations include the relatively rare outcomes of interest, unrecognized confounders, and the complex interaction between HH and HO-MDROs, since poor HH adherence on a unit may lead to increased attention from infection prevention and therefore increased focus on other MDRO prevention measures.

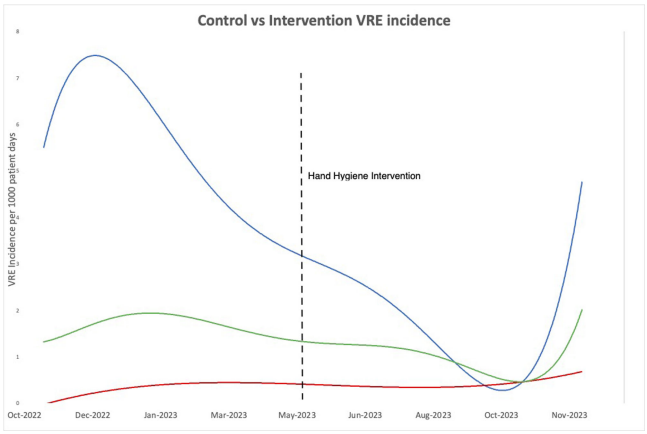
Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s100–s102
doi:10.1017/ash.2024.248

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Hand Hygiene

Empowering Patient Hand Hygiene and Reducing Infection in the Oncology Population

Erica LeBlanc, University Health Network; Selasie Ametorwo, UHN IPAC Team; Kelsey Houston, University Health Network; Jessica Kociper, University Health Network; Susy Hota, University Health Network and Alon Vaisman, Infection Prevention and Control, University Health Network

Background: Significant focus has been placed on healthcare worker hand hygiene, but little attention is has been assigned to the role of patient hand hygiene (HH) in reducing hospital acquired infections. Therefore, in this quality improvement study, we examined the impact of providing patients with hand hygiene products around mealtime on increasing patient HH adherence and on reducing acquisition of nosocomial antibiotic resistant organisms. **Methods:** Patients on two inpatient leukemia units at a tertiary oncologic center were provided with a single use pre-packaged alcohol wipe on their meal trays prior to every meal (three times daily). Additionally, an information card explaining to patients how and when to use the alcohol wipe was provided on the meal trays three times a week. Both the wipe and instructions were designed with input from patient representatives at the hospital. Two oncologic control units were selected where no specific intervention for patient hand hygiene was conducted. Patient hand hygiene adherence on the control and intervention units were measured through once monthly patient interviews conducted after meals where patients were asked to recall whether they washed their hands prior to eating (using any product). Vancomycin Resistant Enterococcus (VRE) incidence was compared on the intervention and control units during the 7 months prior and 7 months following initiating the intervention. **Results:** During the seven-month intervention period, more than 15 000 wipes were dispensed to patients on the intervention units. Through interview, 91% of 87 patients on the intervention units reported cleaning their hands before eating a meal using any cleaning product compared to 72% of 68 patients on the control units (X2 = 9.32, p = 0.002). Furthermore, on the intervention units, 30 (38%) patients endorsed using the provided hand hygiene product. During intervention period, the combined incidence rate of VRE the intervention units was 1.85 case/1000 patient-days compared to 5.35 cases/1000 patient-days during the 7 months prior to intervention



(t = 3.24, p=0.007)(Figure 1). **Conclusions:** This patient-centered quality improvement intervention increased patient hand hygiene and potentially reduced VRE incidence in a vulnerable oncologic population. This practical intervention that incorporated the patient perspective provided accessible hand hygiene products with simple instruction and reminders required minimal participation of unit staff. Further application of the intervention in non-oncologic populations is needed to further establish the relationship between patient hand hygiene and the acquisition of nosocomial infections.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s102
doi:10.1017/ash.2024.249

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Implementation Science

Managerial Influence on Infection Prevention and Control (IPC) Implementation in Israeli Hospitals: A Doctoral Research Study

Dafna Chen, National Center for Infection Control and Antibiotic Resistance, Tel-Aviv Sourasky Medical Center and Stefan Cojocaru, Alexandru Ioan Cuza University from Iasi, Romania

Background: This research, part of a doctoral study, aims to examine the impact of managerial factors on the implementation of Infection Prevention and Control (IPC) measures in Israeli hospitals. The study focuses on identifying key facilitators and barriers from the perspectives of physician and nurse managers, with an emphasis on understanding the integration of managerial strategies and theoretical frameworks in IPC implementation. Objective: The objective is to explore specific managerial factors, both facilitators and barriers, influencing the effective implementation of IPC measures. The research investigates these influences through the lens of physicians and nurses managing IPC units in public hospital settings. Methodology: A mixed-method approach was adopted, involving in-depth interviews with ten IPC-Unit managers (five physicians and five nurses) and a comprehensive questionnaire distributed among IPC-Unit heads. The study's demographic and professional profiles of participants are detailed in Table 1. The data collection process encompassed an Activity Assessment Questionnaire (2-AAQ) and an Organizational Change Implementation Questionnaire (3-OrgChangeImplQ), with the distribution of responses categorized by implementation stages and sociological theories (Tables 2-4). **Result:** Managerial autonomy emerged as a significant catalyst for IPC implementation, with supportive leadership and resource allocation being critical. Differences in approaches between physician and nurse managers were observed, reflecting diverse strategies in planning, execution, monitoring, and maintenance of IPC measures. The findings also revealed a natural alignment with sociological theories, particularly Normalization Process Theory (NPT) and Diffusion of Innovations (DOI), despite a lack of formal training in these areas. **Conclusions:** The study underscores the multifaceted nature of IPC implementation, highlighting the importance of managerial autonomy,

Table 1: Demographic and Professional Profile of Questionnaire Respondents

Category, N=50	Sub Category	Frequency& Percent	Frequency& Percent
		Physicians-Head of the IPC-Unit	Nurses-Head of the IPC-Unit
Role	Physicians/ Nurses	19 (38%)	31(62%)
Gender	Male	7 (37%)	6 (19%)
	Female	12 (63%)	25 (81%)
Education	PhD (Nurse)	0 (0%)	3 (9.5%)
	MD (3 Professor)	3 (16%)	0 (0%)
	Master's (Nurse)	16 (84%)	26 (84%)
	Bachelor's (Nurse)	0 (0%)	2 (6.5%)
Trainings and advanced courses	1. Specialization/ Advanced course in infection prevention and control	31(100%)	11(58%)
	2. Advanced management skills	18(58%)	8(42%)
	3. Development and promotion of work programs	7(23%)	5(26%)
	4. Implementing changes within the organization	5(16%)	4(21%)
	5. Monitoring infections and investigating outbreaks	13(42%)	11(58%)

Category, Sub Category	Minimum Maximum Mean	Std. Deviation	Minimum Maximum Mean	Std. Deviation
	Physicians-Head of the IPC-Unit, N=19		Nurses-Head of the IPC-Unit, N=31	
Age	52 (38-75)	10.01	54 (37-69)	8.17
Professional Tenure	23 (11-40)	8.34	30 (12-49)	9.06
Tenure in Unit	11 (1-24)	6.78	12 (2-31)	6.74
Management Tenure	7 (0-20)	5.91	9.6 (1-31)	7.67
Job Percentage	.94 (0.5-1.0)	0.15	.96 (0.5-1.0)	0.12

Explanation of the Table: This table presents a detailed breakdown of the demographic, professional, and educational characteristics of 50 heads of IPC units. It also provides insights into their focus areas and the distribution of various attributes

Table 2: 3-OrgChangeImplQ: Organizational Change Implementation Questionnaire Distribution by Implementation Stages

3-OrgChangeImplQ (N=50)	Dependent Variable	Mean	Std. Deviation	Mean	Std. Deviation	F (1, 48)	Sig.
1. OrgChangeImplQ 1:		**Doctor, (N=19)**		**Nurse, (N=31)**			
Implementation stages (Total 20)	1. Preparation and Planning (8)	6.07	0.55	6.32	0.69	1.70	0.20
	2. Execution and Implementation (5)	6.11	0.66	6.26	0.68	1.35	0.25
	3. Monitoring and Control (3)	6.07	0.83	6.22	0.65	1.00	0.32
	4. Maintenance and Promotion (4)	5.88	0.86	6.40	0.68	4.276*	0.045
OrgChangeImplQ	Overall OrgChangeImplQ Score	6.04	0.64	6.31	0.62	2.33	0.13

*P < .05 ** p < .01*

Explanation of the Tables 2-3: *The tables provide a comprehensive assessment of how doctor-managers and nurse-managers in infection prevention units perceive the significance of 20 specific principles related to organizational change implementation. These principles are categorized based on distinct frameworks:*

1. ***3-OrgChangeImplQ 1****: Categorization according to implementation stages.*
2. ***3-OrgChangeImplQ 2 (NPT)****: Classification based on the Normalization Process Theory.*
3. ***3-OrgChangeImplQ 3 (DOI)****: Classification in line with the Diffusion of Innovations Theory. The goal is to uncover how these managers perceive the significance of implementing changes in the organization and work program, particularly highlighting perceptual differences between physicians and nurses.*

Table 3: 3-OrgChangeImplQ: Organizational Change Implementation Questionnaire Distribution by Sociological Theories

3OrgChangeImplQ (N=50)	Dependent Variable	Mean	Std. Deviation	Mean	Std. Deviation	F (1, 48)	Sig.
1. OrgChangeImplQ 2:		**Doctor, (N=19)**		**Nurse, (N=31)**			
Classification by Sociological Theories the Normalization Process Theory (NPT). (Total 20)	1. Coherence (4)	6.21	0.55	6.43	0.71	1.86	0.18
	2. Conscious Participation (8)	6.06	0.58	6.26	0.62	1.87	0.18
	3. Collective Action (5)	5.89	0.89	6.22	0.68	1.94	0.17
	4. Reflective Monitoring (4)	5.96	0.93	6.31	0.73	1.43	0.24
2. OrgChangeImplQ3		**Doctor, (N=19)**		**Nurse, (N=31)**			
Classification by Sociological Theories Diffusion of Innovations (DOI). (Total 20)	1. Innovation Characteristics (6)	6.18	0.60	6.41	0.68	1.85	0.18
	2. Communication Pathways (3)	6.12	0.79	6.51	0.61	4.340*	0.04
	3. Time Characteristics (4)	5.95	0.75	6.09	0.68	0.83	0.37
	4. Social System (6)	5.99	0.64	6.41	0.67	3.916*	0.05
	5. Innovators (7)	6.02	0.64	6.30	0.67	1.89	0.18
OrgChangeImplQ	Overall OrgChangeImplQ Score	6.04	0.64	6.31	0.62	2.33	0.13

*P < .05 ** p < .01*

Explanation of the Tables 2-3: *The tables provide a comprehensive assessment of how doctor-managers and nurse-managers in infection prevention units perceive the significance of 20 specific principles related to organizational change implementation. These principles are categorized based on distinct frameworks:*

Table 4: Correlations between 2-AAQ: Activity Assessment Questionnaire and Organizational Change Implementation, 3-OrgChangeImplQ

Time allocation & Organizational Change Implementation Questionnaires- Pearson Correlation	Management, promotion of unit team and work programs	Training and instructions	Audits/observations/consultations	Infection monitoring	Investigation of events and outbreaks	Research
Questionnaire distribution by Implementation stages						
1. Preparation and Planning	.045	.374**	.070	-.131	.011	.137
2. Execution and Implementation	-.001	.272*	.098	-.140	-.065	.066
3. Monitoring and Control	-.035	.270*	-.052	-.099	.029	.128
4. Maintenance and Promotion	.180	.407**	.120	-.170	-.052	.044
Questionnaire distribution by NPT Theory						
1. Coherence	.080	.344**	.021	-.146	-.006	.129
2. Conscious Participation	-.019	.335**	.120	-.113	-.026	.137
3. Collective Action	.052	.345**	.050	-.176	-.023	.051
4. Reflective Monitoring	.160	.355**	.049	-.151	-.012	.018
Questionnaire distribution by Diffusion of Innovations (DOI)						
1. Characteristics of Innovation	.095	.345**	.018	-.116	-.021	.106
2. Communication Pathways	-.011	.357**	.138	-.058	-.073	.019
3. Time Characteristics	-.027	.209	-.018	-.219	-.091	.190
4. Social System	.104	.447**	.103	-.173	.078	.096
5. Innovators	.127	.399**	.178	-.130	.051	.047
Overall Score in Change	.057	.372**	.076	-.150	-.020	.106

** Correlation is significant at the 0.01 level (1-tailed). * Correlation is significant at the 0.05 level (1-tailed). *Explanation of the Table 4: Category: Time Allocation & Organizational Change Implementation Questionnaires - Pearson Correlation: This section details the correlation coefficients between the time IPC unit heads spent on six main activities and their integration with three distinct Organizational Change Implementation Questionnaires (3-OrgChangeImplQ). These questionnaires are divided by implementation stages and classified according to specific sociological theories.*

https://doi.org/10.1017/ash.2024.250 Published online by Cambridge University Press

supportive leadership, and a deep understanding of organizational culture. The inherent alignment of IPC strategies with NPT and DOI theories suggests the potential of these frameworks in guiding IPC implementation. The research advocates for the integration of these theoretical perspectives into formal training programs to enhance the effectiveness of IPC measures in healthcare settings.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s102–s104
doi:10.1017/ash.2024.250

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Infection Control

Presenteeism Among Healthcare Professionals (HCP) During the COVID-19 Pandemic: Survey of Perceived Barriers

Katherine Dolan, University of Wisconsin School of Medicine and Public Health; Rachel Meyer, University of Wisconsin Hospital and Clinics; Laura Anderson, UW Health; Dan Shirley, University of Wisconsin School of Medicine and Public Health; Michael Kessler, UW Madison School of Medicine and Public Health; Linda Stevens, UW Health and Nasia Safdar, University of Wisconsin, Madison

Background: Presenteeism when ill in healthcare personnel (HCP) can contribute to the spread of respiratory illness among HCP and patients. However, during the COVID-19 pandemic and now, there are substantial challenges preventing HCP from staying home when ill. We examined these challenges using the Systems Engineering Initiative for Patient Safety (SEIPS) framework. **Method:** As part of a larger anonymous electronic survey between 3/11/2022 and 4/12/2022 at an academic tertiary referral center, in inpatient and ambulatory settings where respondents were asked to describe factors impacting presenteeism when ill, we analyzed free-text responses using the SEIPS categories of tasks, tools/technology, person, organization, and physical environment. **Result:** 522 comments were received in response to the open-ended survey question asking individuals to describe any factors that would assist them in remaining home and/or help them get tested for COVID-19 when they have symptoms of a respiratory illness; 21 were excluded due to absent or incomplete response. Of the remaining responses (N = 501, Figure 1), 82% were associated with a single SEIPS component such as organization (N = 409), while other responses discussed factors that involved two SEIPS components, in no particular order (N = 92). A majority of the responses (N = 324, 55%) reported organizational barriers, frequently citing a strict sick call-in policy as well as a lack of protected time-off for COVID-19 testing or related absences. The next two most commonly identified components were physical environment (N= 88, 15%) and tasks (N = 72, 12%), mentioning barriers such as far distances to testing centers and prolonged waiting periods for testing **Results:** The person and tools/technology components were less commonly identified, with a frequency of 9% each. **Conclusion:** A number of systems level factors were identified that may impact the ability of HCP to stay home when ill. Interventions to help overcome HCP perceived barriers to staying home when experiencing respiratory symptoms should focus on the policies and practices within an organization. Communication from leadership should support staying home with respiratory symptoms by creating plans for coverage and back up consistently across all employee types in direct care.

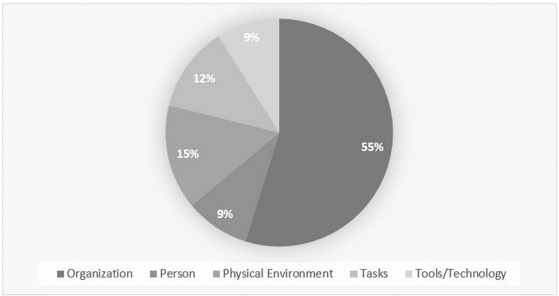


Figure 1: Pie Chart showing the frequency of each SEIPS component identified in the survey responses

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s104
doi:10.1017/ash.2024.251

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Infection Prevention in Low and Middle-Income Countries

Evaluation of Vulnerabilities for the Spread of Carbapenem Resistant Organisms at Five Hospitals in India

Susan Fallon, Johns Hopkins Hospital; Umang Agrawal, PD Hinduja Hospital; Shaoli Basu, P.D. Hinduja Hospital and MRC; Valeria Fabre, Johns Hopkins University School of Medicine; Sarah Fisseha, Johns Hopkins Hospital; Johns Hopkins Hospital, Johns Hopkins Hospital; Arjunlal Kakrani, Dr D Y Patil Medical College, Hospital & Research Centre; Rajesh Karyakarte, BJ Government Medical College and Sassoon Hospital, Pune; Mahadevan Kumar, Bharati Vidyapeeth Medical College; Abhijeet Mane, Bharati Vidyapeeth (DTU) Medical College and Hospital; Vidya Mave, Medicine, Johns Hopkins University; Yatin Mehta, Medanta The Medicity; SHAHZAD MIRZA, Dr D Y Patil Medical College Hospital And Research Centre, Dr D Y Patil Vidyapeeth, Pimpri, Pune; Akaash Patel, Johns Hopkins Hospital; Bharat Randive, Byramjee Jeejeebhoy Government Medical College-Johns Hopkins University Clinical Research Site, Pune, India; Prachala Rathod, BJGMC and Sasoon Hospital Pune; Matthew Robinson, Johns Hopkins School of Medicine; Camilla Rodrigues, Hinduja Hospital, Mumbai; Smita Sarma, Medanta - The Medicity; Jignesh Shah, Bharati Vidyapeeth University Medical College Pune; Patricia Simner, Johns Hopkins University; SWEETY SINGH, Byramjee Jeejeebhoy Government Medical College-Johns Hopkins University Clinical Research Site, Pune, India and Melanie Curless, Johns Hopkins Hospital

Background: The 2022 WHO global survey on infection prevention and control (IPC) exposes significant gaps in IPC in the WHO Southeast Asia region. A better understanding of IPC vulnerabilities will inform improvement initiatives. We describe an evaluation of IPC practices known to prevent and contain carbapenem-resistant organisms (CROs) at hospitals participating in the United States Centers for Disease Control Global Action in Healthcare Network –Antimicrobial Resistance in India. Prior hospital evaluations suggest resistance to carbapenems among gram-negative isolates is up to 45%. **Methods:** We conducted a mixed methods evaluation including cross-sectional surveys, semi-structured interviews, and site observations at five hospitals (one government, two private tertiary care, and two private teaching) located in three cities. The number of hospital beds ranged from 362 to 2,011. Hospital and IPC program characteristics, and CRO prevention and containment activities were examined virtually. Site observations focused on hand hygiene, environmental cleaning, personal protective equipment (PPE), CRO containment practices and use of water for patient care. **Results:** All sites had IPC programs with established policies and qualified IPC staff. The IPC nurse-to-bed ratio ranged from 1:73 to 1:432 (mean, 1:209). Due to the integral role of microbiology staff in IPC at these hospitals, the two departments had strong communication channels associated with CRO identification. Screening for CRO colonization, if done, targeted patients from outside hospitals. Three of the five hospitals routinely implemented contact precautions for patients with identified CROs, displayed isolation signage at the bedside, and provided adequate PPE at point-of-use; however, all sites reported barriers to effective isolation and/or cohorting patients with CROs. Timely communication of CROs to clinical staff varied and no sites effectively relayed CRO status upon patient discharge to another facility. IPC teams identified gaps in environmental cleaning procedures and practices related to medical devices and equipment. All sites used alternatives to tap water for clinical care and sink etiquette was evident. Each IPC team performed audits of patient isolation and hand hygiene practices. Despite