

changes to estimate IP-derived denominators. We compared rates generated by different numerators and denominators (EMR and IP) using Fisher's exact test.

Results: We identified 176 SSIs during the study period. Of the 82 changes made by IPs, 37 (45%) were meaningful. The proportion of meaningful changes ranged from 0-60% across all months. Out of 34 months, 21 (62%) showed a higher rate when using EMR class vs. IP class with the largest difference of 2.33 vs. 0.47 ($p = 0.22$). When comparing the alternative rate to IP class rate across all months, the rate was 1.14 vs. 0.91 ($p = 0.17$). For both comparisons, September 2019 showed the largest monthly rate difference.

Conclusions: This study found that using EMR wound class for numerator and denominator increases the SSI rate, although not significantly different from IP class rate, even when adjusting the denominator for meaningful changes. Rates using IP class numerator and EMR class denominators are likely accurate.

Leadership Development and Program Management

LDPM-17

A Whole New World: Changes in the Nursing Home Infection Preventionist Role in Response to the COVID-19 Pandemic

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Background: Nursing home (NH) infection prevention and control (IPC) programs struggled before the COVID-19 pandemic. As the pandemic began, NHs were challenged with frequently changing directives including isolation, testing, visitation, and reporting. Within a larger research project, we compared changes in the infection preventionist (IP) role pre-COVID (before March 2020) and during the pandemic.

Methods: 78 Michigan NHs participated in a 12-month program to reduce healthcare-associated infections from 2018-2021. A 36-question survey on IPC characteristics was sent before starting each of four cohorts. Surveys were completed by IPs, nursing directors, or NH administrators. We compared IPC characteristics pre- and intra-COVID using Fisher's exact test and Wilcoxon Rank Sum to assess significance in categorical and continuous descriptors, respectively.

Results: 74 (94.8%) NHs completed the survey, 56 pre-COVID (before March 2020) and 18 during COVID (> one year after COVID was identified in Michigan). Full-time equivalent (FTE) for the IP role was similar between the two groups, but hours worked per week increased significantly from an average 20 to 38 hours per week ($p < 0.001$). Half of respondents in 2021 reported working 40 hours or more on IPC activities. Despite the additional workload, the IP did not have a significant decrease in their non-IP responsibilities (e.g., staff educator, employee health). Pre-COVID, 21.8% of NHs were enrolled in CDC's National Health Safety Network (NHSN). As mandatory COVID reporting into NHSN began mid-2021, its use contributed to an average of five additional hours per week. Inter-facility notification of resident infections was done by a variety of methods, with facility-to-facility telephone calls increasing during COVID.

Conclusions: COVID-19 has dramatically added to the IP workload in NH settings with no reduction in their other non-IP responsibilities. With reporting requirements unlikely to decrease soon, investment

into staffing is needed to reduce staff burnout, maintain quality of care, and resident safety.

LDPM-18

The Role of Infection Prevention Department Structure in Maintaining Program Resiliency

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Background: Infection Prevention (IP) department structures vary in how responsibilities are assigned. During the COVID-19 pandemic IP program workload significantly increased and healthcare-associated infections (HAI) performance declined. This study assessed whether department structures that reassign administrative tasks away from hospital-based IPs are able to recover quickly from the effects of increased program demand and hospital surge.

Methods: The IP department structure of a 13-hospital system was modified in March 2020 with the creation of a centralized surveillance (CS) team. The CS team was assigned responsibility for communicable disease reporting, healthcare associated infection (HAI) surveillance, and maintenance of HAI-specific line listings. Line listing data entry included electronic health record review for potential performance improvement (PI) opportunities. Hospital-based IPs remained responsible for site-based functions. PI efforts were initiated during 2020 targeting abdominal hysterectomy (HYST), Clostridoides difficile (CDI) and catheter-associated urinary tract infection (CAUTI) using data gathered by the CS team both during and between surges of COVID-19.

Results: The standardized infection ratio (SIR) of HAIs where PI efforts were initiated were compared from 2019 to 2021 to assess department resilience during periods of increased program demand. The CAUTI SIR decreased from 1.02 in 2019 to 0.485 in 2021. ($p = 0.001$). The CDI SIR decreased from 0.683 in 2019 to 0.457 in 2021. ($p = 0.003$). The HYST SIR decreased from 1.483 in 2019 to 0.00 in 2021. ($p = 0.005$). There was no statistical difference in central line-associated bloodstream infection (CLABSI) or methicillin-resistant Staphylococcus aureus (MRSA) performance from 2019 to 2021.

Conclusions: IP program structure can create resiliency during periods of increased IP program demand. Decoupling surveillance and administrative tasks from hospital-based IPs is one approach hospitals and healthcare systems can consider helping ensure critical performance improvement activities continue regardless of demands within hospitals.

LDPM-19

Who You Gonna Call? A Novel Approach to Supporting Infection Prevention On-Call

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Background: The Infection Prevention and Control (IPC) department of a large, pediatric health system provides on-call support to employees twenty-four hours a day, seven days a week. Over the past two years, IPC has experienced an approximately 50% increase in on-call pages, leading to frequent interruptions in daily work of the infection preventionists (IP) and more response required during non-business hours. We aimed to develop a more efficient method for answering and triaging IPC questions.

Methods: IPC partnered with an existing 24/7 call center already in place at the health system. Employees call this IPC Communication Center directly with their questions. Agents answering calls were trained on topics including but not limited to isolation precautions, coronavirus disease 2019 (COVID-19), multi-drug resistant organisms and communicable diseases. Agents were provided resources to assist with immediate response to inquiries and they only escalated to the IP on-call as needed. IPC provided ongoing education to agents. Data were tracked and reviewed weekly including number of inquiries, inquiries agents resolved versus escalated to IPC and overall topic themes.

Results: Over seven weeks, agents handled 339 employee inquiries. During the first week post implementation, 17% were immediately answered by agents without IP escalation. By the end of week seven, 47% of callers received an immediate response to their inquiry without the need to escalate to IPC. Overall, 31% of inquiries required no IP escalation. Main inquiry topic themes were isolation precautions (32%) and COVID-19 (35%).

Conclusions: An IPC Communication Center provides direct support for employees while decreasing the number of inquiries reaching IPC. Partnering with other departments to implement a novel approach to IPC on-call assistance can lead to more efficient processes that provide better support to employees and IP within your health system.

Occupational Health and Wellness

OHW-20

Capitalizing on a Global Personal Protective Equipment (PPE) Shortage to Design a More Functional and Sustainable Isolation Gown

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Background: The COVID-19 pandemic caused a global PPE shortage. Across our health system, the type of disposable isolation gowns we were accustomed to using were not as readily available. As a result, we used new varieties of isolation gowns of inconsistent quality. With isolation gowns being the second most used type of PPE at our organization, we used and disposed of almost 3.1 million single-use isolation gowns, amounting to approximately 213 tons of waste in a year. An opportunity arose to design and implement a consistently high quality and reusable isolation gown that would both be protected from supply chain disruptions and reduce our health system's ecological footprint.

Methods: After trialing several varieties of disposable and reusable gowns, a substantial amount of feedback was gathered over several months from end-users, Infection Prevention, and Supply Chain. This feedback informed the design of a custom reusable isolation gown that resolves identified problems in functionality, particularly barrier effectiveness, comfort, fit, and ease of donning and doffing. The new design meets current healthcare protection clothing standards and specifications.

Results: The custom reusable isolation gowns are being implemented at all hospitals across our health system. There is adequate supply of the reusable gowns, as the product is not susceptible to PPE shortages. There is overwhelmingly positive feedback from end-users on functionality and effectiveness. The gowns are safely laundered according to healthcare standards, resulting in less waste when compared to single-use isolation gowns.

Conclusions: PPE shortages leave frontline healthcare workers ill-equipped to care for patients. Design and implementation of a more functional and sustainable product, that is not vulnerable to supply chain disruptions, helps ensure our healthcare workers have the resources needed to protect themselves and others from spreading infectious pathogens.

Quality Assurance and Performance Improvement

QAPI-21

Decreasing Peripheral Intravenous Catheter (PIV) Associated Methicillin-resistant Staphylococcus Aureus (MRSA) Bacteremia

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Background: A 210-bed community hospital experienced 13 MRSA bacteremia events from July 2017 - June 2019. Among those infections, 46.2% were associated with the use of a PIV. Review of MRSA bacteremia infections identified a lack of standardized prevention measures in patients with PIVs.

Methods: A multidisciplinary team was assembled consisting of Infection Prevention (IP), nursing, anesthesia, and Emergency Medical Services (EMS) to create and implement a PIV bundle. The bundle included labeling, dating, and assessing intact, clean dressings. Following bundle development, education was conducted across the hospital via skills fair with hands-on training and roving in-services to ensure 90% of affected staff were reached. IP collected pre-intervention data and bundle audit data weekly to monitor improvement. During audits, the IP performed just-in time education and feedback on bundle non-compliance. PIV-bacteremia prevention education was incorporated into orientation for new nurses. Additional education was conducted with Anesthesia and EMS providers on PIV insertion technique and infection prevention processes.

Results: Baseline compliance with PIV-bundle components was 13.6% and increased to 69.0% in December of 2019 when the project ended. Dressing cleanliness increased from 66.0% in the baseline period to 88.7%. Current data in December 2021 indicates an overall PIV bundle compliance rate of 80.6% demonstrating sustainability in the intervention. PIV-associated MRSA bacteremia decreased from 1.04 infections/10,000 patient days to 0 infections/10,000 patient days (p=0.008).

Conclusions: PIV-associated bacteremia can be a major contributor to overall MRSA bacteremia. A comprehensive PIV bundle with stakeholder engagement is an effective intervention to reduce MRSA-bacteremia. Improving PIV maintenance practices reduces MRSA bacteremia.

QAPI-22

Don't Jump to Conclusions, a Central Line-associated Bloodstream Infection Pseudo-Outbreak Investigation