were conducted in Stata/MP version 17.0, and we performed multivariable conditional logistic regression with an alpha of 0.05 as threshold for statistical significance. The model was built according to a priori hypotheses and results from bivariate analysis of individual risk factors. **Results:** There were 32 SSI among 1709 cesarean deliveries, and all cases successfully matched with 4 controls for an analytic sample of 128. Bivariate analyses identified 7 relevant variables for inclusion in the multivariable model which narrowed down significant risk factors to 3: operative time (in minutes), post-operative chlorhexidine gluconate (CHG) bathing, and number of people in the operating room. Assessment of fit indices suggested an excellent fit with pseudo R-square of 0.526. **Conclusions:** This study demonstrated the utility of a case-control study design to identify attributable risk factors for relatively rare but significantly trending infection events. Not only is the design more efficient (e.g., time needed to abstract 50 data points for each patient), but it also employs statistical analyses that are often lacking in case-by-case investigations or RCA. It also has the power to narrow down risk factors for focused prevention efforts to get "the most bang for the buck."

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s134–s135
doi:10.1017/ash.2024.303

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Quality Improvement

Automated Discontinuation of Isolation Precautions with the Use of Electronic Health Record Tools

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Background: At a comprehensive cancer center, hundreds of patients are screened daily for infections requiring the implementation of isolation precautions. Discontinuation of precautions is determined by negative testing, resolution of infection, or other criteria. Determining appropriate discontinuation of isolation precautions is labor intensive for Infection Preventionists (IPs). An unintended consequence of manual discontinuation is that numerous patients remain on isolation indefinitely. This was amplified during the COVID-19 pandemic when thousands of patients were placed on isolation precautions. Using electronic health record (EHR) tools, opportunities for process improvements were developed. Our goal was to establish an automated method to resolve isolation precautions. We aimed to decrease the number of manually resolved precautions by 25% each fiscal year (FY), compared to our baseline of activity in FY 2019 (FY19). Our secondary aim was to automate adding and resolving precautions when testing is initiated for suspected transmissible conditions (rule-out testing features).

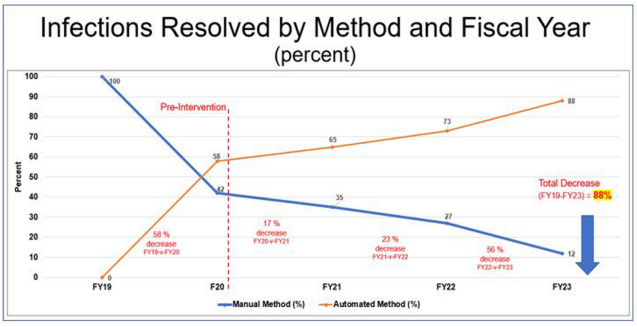

Figure 1

Line graph comparing rates of manual removal (blue line) versus automated EHR removal (orange line) of isolation restrictions over a five-year study period. Following the implementation of automated tools in FY20, there was a significant reduction in the time dedicated by IPs to removing isolation banners with 88% of all isolation statuses being removed automatically by EHR tools.

Methods: Infection Control (IC) collaborated with EHR analysts to build tools to automate a process for appropriate isolation discontinuation. We reviewed our internal data in conjunction with evidence-based guidelines and started with acute, short-term infections that do not require repeat testing or cultures. Expiration dates were established for these infections to resolve automatically after meeting criteria. A secondary review determined that additional infections could be added safely to this process. The secondary aim of establishing rule-out testing was implemented for respiratory viral panels (including SARS-COV-2) and C. difficile testing. When testing was ordered for these conditions, a suspect-infection status and alert for precautions were automatically added to patients' EHR banners. If the assay resulted negative, the suspect-infection status was automatically removed from their chart. **Results:** Our baseline of active infections in FY19 was approximately 2,700 cases. From FY19 through FY23, 123,115 infections were added to our patients, and 128,422 infections were resolved. In the first year of implementation, there was a 58% decrease in the number of manually resolved cases. From the initiation of our project through the end of FY23, manual discontinuation of precautions has decreased by 88%. **Conclusions:** We successfully implemented a process improvement project to appropriately remove patients from isolation precautions automatically using EHR tools, which resulted in reduced labor on our IPs and patient time spent on isolation restrictions. Additional benefits from this process improvement extend to decreasing unnecessary costs to the patient and the organization, better stewardship of supply/resources, and improving patient satisfaction.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s135
doi:10.1017/ash.2024.304

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Quality Improvement

Utilizing Technology to Fill the Ambulatory Care Communicable Disease Practice Gap

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Background: Infection Prevention (IP) practices in ambulatory care are often reactive and many communicable diseases in the community often do not fall onto IP's radar until the patient becomes ill enough to seek inpatient services. The gap between ambulatory and inpatient care can lead to increased transmission and illness severity. Early identification has substantial impacts on timely implementation of IP mitigation strategies, appropriate handoff upon entry into other care settings, and timely reporting to public health organizations. Current IP processes underutilize electronic health record (EHR) capabilities by relying upon lab driven notifications. This project sought to redesign the IP's workflows, advancing the health system beyond the acute care setting and into the ambulatory care setting by adding the power of diagnosis codes to close a practice gap. **Method:** Infection Prevention and Information Technology collaborated to build silent best practice advisories (BPAs) in the EHR that utilized

Build Summary with Summary of Results		
	Pre Intervention	Post Intervention
Lab Orderables	Varicella PCR, Varicella IgM	Varicella PCR, Varicella IgM
Diagnosis Codes Utilized	None	B01, B01.0, B01.1, B01.11, B01.12, B01.2, B01.8, B01.81, B01.89, B01.9
Varicella zoster Cases Captured	3% 36 with Varicella diagnosis 1 case captured by physician call	80% 40 with Varicella diagnosis 32 captured by BPA
HCW Exposure Work Ups Completed	4% 28 cases eligible for exposure 1 case reported for exposure	70% 30 cases eligible for exposure 21 cases reported for exposure
Post BPA Logic Correction: Varicella zoster Cases Captured	N/A	100% 24 with Varicella diagnosis 24 captured by BPA
Post BPA Logic Correction: HCW Exposure Work Ups Completed	N/A	100% 16 cases eligible for exposure 16 cases reported for exposure