Presentation Type:
Poster Presentation
Subject Category: Respiratory Viruses Other than SARS-CoV-2
Influenza Positivity in Acute Myocardial Infarction Compared With Other Emergency Department Diagnoses‡

Alexia El Khoury[1], Joy Abou Farah[1], Luke Kabbara[2], Zainab Albar, Jay Krishnan[3], Elie Saade[1] and University Hospitals Cleveland Medical Center
[1]Case Western Reserve University; [2]Case Western Reserve University/ UH Hospitals and [3]University Hospitals, Case Western Reserve University

Background: Influenza infection has been temporally associated with acute cardiovascular events, including myocardial infarction (MI). We evaluated whether laboratory-confirmed influenza infection is disproportionately present among ED patients presenting with acute MI compared with patients presenting with other common acute diagnoses. **Methods:** We conducted a retrospective cohort study using TriNetX data from the 2024–2025 influenza season. Adult ED patients (<18yrs) presenting with acute MI were compared to patients presenting with mutually exclusive acute diagnoses, including gastroenteritis, urinary tract infection or urolithiasis, appendicitis, pancreatitis, cholecystitis, pulmonary embolism, aortic dissection, and myocarditis or pericarditis. Patients with COVID infection 30 days prior the ED visit were excluded. Influenza positivity during the ED encounter was defined as the outcome. All comparisons were adjusted using 1:1 propensity score matching for demographics, cardiovascular risk factors, chronic respiratory disease, and healthcare utilization indicators. Risk ratios (RRs) and 95% confidence intervals (CIs) were calculated. **Results:** Across propensity score–matched comparisons, influenza infection was consistently more prevalent among ED patients presenting with acute MI than among most comparator diagnoses. Influenza positivity was significantly higher in MI compared with gastroenteritis (RR 1.97, 95% CI 1.76–2.20), urinary tract infection or urolithiasis (RR 2.29, 95% CI 2.08–2.52), pancreatitis (RR 3.84, 95% CI 2.90–5.08), cholecystitis or cholelithiasis (RR 3.38, 95% CI 2.92–3.91), and appendicitis (RR 5.58, 95% CI 3.62–8.61). Among high-acuity cardiovascular chest-pain presentations, influenza positivity remained higher in MI compared with pulmonary embolism (RR 1.46, 95% CI 1.27–1.68) and aortic dissection (RR 1.85, 95% CI 1.59–2.15). In contrast, no significant difference was observed between MI and myocarditis or pericarditis (RR 0.79, 95% CI 0.51–1.23). **Conclusions:** In this diagnosis-based, propensity score–matched ED analysis, laboratory-confirmed influenza infection was disproportionately prevalent among patients presenting with acute myocardial infarction compared with a broad range of other acute ED diagnoses. The persistence of this association across infectious, surgical, and high-acuity cardiovascular comparators, alongside the absence of association with myocarditis or pericarditis, suggests that the observed association is not simply due to patients being sicker or undergoing more intensive diagnostic evaluation. These findings are hypothesis-generating and support further investigation into temporal and mechanistic links between influenza infection and acute coronary events.

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Table 1. Influenza Positivity Among ED Patients with Acute MI Compared with Other Acute Diagnoses (PSM 1:1)

Comparator Diagnosis (vs MI)	Risk Ratio (RR)	95% Confidence Interval
Gastroenteritis	1.97	1.76 – 2.20
UTI or Urolithiasis	2.29	2.08 – 2.52
Acute Pancreatitis	3.84	2.90 – 5.08
Cholecystitis / Cholelithiasis	3.38	2.92 – 3.91
Appendicitis	5.58	3.62 – 8.61
Pulmonary Embolism	1.46	1.27 – 1.68
Aortic Dissection	1.85	1.59 – 2.15
Myocarditis / Pericarditis	0.79	0.51 – 1.23

Presentation Type:
Poster Presentation
Subject Category: Respiratory Viruses Other than SARS-CoV-2
Prevention of Secondary Cases after a Measles Exposure at an Academic Medical Center‡

Jean Barth[1], Leah Siple[1], Alyssa Olson[1], Jenna Rasmusson[1], Rebecca Faller[1], Michelle Meyer[1], Becky Baxter[1], Emily Loberg[1], Debra Apenhorst[2], Leah Higbe[3], Sarah Bellows Mahler[2], Sheryl Maurer, Heidi Whitehurst, Felice Paden, Sheila Higbe[1], Elena Beam[2], John OHoro[4], Emily Levy[1], W. Charles Huskins[1] and Priya Sampathkumar[5]
[1]Mayo Clinic; [2]Mayo Clinic Rochester; [3]Mayo; [4]Mayo Clinic College of Medicine and [5]Mayo Clinic, Rochester, MN

Background: Measles is a highly transmissible virus. A single case can result in significant exposures within a healthcare facility and prompt action is needed to prevent secondary cases. In October 2025, Infection Prevention and Control (IPAC) was notified of a patient being admitted to our facility with recent international travel and symptoms consistent with measles. The patient was unvaccinated and had five healthcare facility visits prior to measles being suspected and subsequently confirmed. Objective: To describe our facility's effective identification, prioritization, and prophylaxis of individuals exposed to measles. **Methods:** IPAC leveraged the electronic medical record to identify potentially exposed patients. Patients were quickly assessed for age and immune status, then prioritized and assigned to primary care teams. These teams promptly contacted patients and coordinated PEP administration. **Results:** Across five encounters, the index patient exposed 539 other patients. Due to delayed notification, our teams had less than four days to administer PEP for those exposed and still within PEP window. PEP administration began within hours of the index case's positive test and patients received PEP within three days (Table 1). No secondary measles cases occurred within our facility. **Conclusion:** Timely and coordinated multidisciplinary effort enabled us to rapidly respond to our first measles case and control secondary transmission. Although the index case resulted in a large exposure, patients that were exposed and eligible for PEP were quickly prioritized to prevent secondary transmission.

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Table 1.

Exposed individuals from 5 encounters	
Exposed patients	539
Immune	435 (80.7%)
Non-immune or unknown immunity	104 (19.3%)
Post-Exposure Prophylaxis	
Patients eligible for PEP and within PEP window	31
Received PEP	25 (80.6%)
Intravenous immunoglobulin	10
Intramuscular immunoglobulin	11
Measles, mumps, and rubella vaccine	4
Declined PEP	6 (19.4%)

Presentation Type:
Poster Presentation
Craniotomy Surgical Site Infection Cluster: Identification, Response, and Prevention Measures‡

Lisa Parlich[1], Michelle Campoli[2], Heather Voss[3], Christina Silkaitis[1] and Mary Anne Sotelo[3]
[1]Northwestern Medicine; [2]Northwestern Medicine McHenry and [3]Northwestern Memorial Healthcare

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Background: A potential cluster of post-craniotomy surgical site infections was noted by the neurosurgery service in December 2024. A case review revealed a total of five organ space surgical site infections (SSI) identified between October 4th-December 4th, three of which had the same organism isolated, Cutibacterium acnes (C. acnes). **Methods:** Infection Prevention met with Surgical Services, Sterile Processing, Neurosurgery, and Infectious Disease to strategize next steps. After a retrospective review of the five initial SSIs, a case definition was established including patients who underwent a craniotomy procedure and had cultures positive for C. acnes collected upon readmission with signs of infection. An epidemiological curve and line list of cases meeting definition was created. Excluded cases included: C. acnes isolated from the index procedure and unrelated to an infection, isolation of a different organism post craniotomy, and infection post burr hole procedure. Observations of the neurology OR and case setup, pre/intra/post-op workflows and sterile processing practices were completed and staff interviewed. Surgical positioning equipment and instrument instructions for use (IFU) were reviewed. Equipment and implants used in each case were noted and compared to cases without infections to identify similarities. A common DuraGen implant was sent to the Microbiology Laboratory for culturing. The C. acnes isolates were sent to the Molecular Laboratory for genomic typing. **Result:** Altogether, four patients met the case definition. No deficiencies were identified during the observation of the neurology OR and case setup. Staff interviews revealed patients would arrive from the inpatient units prior to procedure with dirty hair and bed linens. Investigation into intra-op practices revealed that key positioning equipment was not being cleaned or disinfected per manufacturer's IFU. Additionally, a retrospective chart review of index procedures revealed a common DuraGen 2x2 implant was utilized in each case. Subsequent culturing of the DuraGen implant resulted in growth of a Cutibacterium species. Molecular typing of the patient and DuraGen samples revealed two of the four patient samples to be genetically similar, however none of the patients to be genetically similar to the DuraGen sample. **Conclusion:** Quick attention to gaps in the OR and engagement of the leadership team led to improved practices and adherence to IFUs. Since the fourth and final case, there have been no additional C. acnes SSI cases. As a result of the investigation, craniotomy cases have been added to Infection Prevention's daily surveillance with completion of root cause analyses for any infection,regardless

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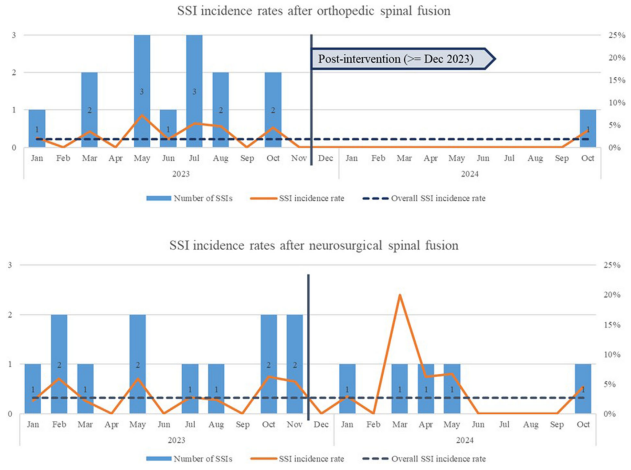
Presentation Type:
Poster Presentation

Evaluation of a Preoperative Decolonization Strategy to Prevent Surgical Site Infection in Spinal Fusion Surgery‡

Subeen Moon[1], Mijung Kim, Hyunju Lee, Miseo Kim, Soyeon Park, Jeeyoon Kim, Jiwon Jung and Yong Pil Chong
[1]Office for Infection Control, Asan Medical Center, Seoul, Korea

Background: Surgical site infection (SSI) following spinal fusion is a major complication that increases mortality and healthcare costs, with Staphylococcus aureus being the most common pathogen. Implementation of an SSI prevention bundle has been reported to significantly reduce SSI rates. This study evaluated changes in SSI rates among orthopedic spinal fusion patients after applying a prevention bundle that included S. aureus decolonization therapy and compared the results with non-intervention neurosurgical spinal fusion patients during the same period. **Methods:** At a tertiary care hospital in Seoul with 2,432 beds, an enhanced SSI prevention bundle including S. aureus decolonization therapy was implemented for all orthopedic spinal fusion patients beginning in December 2023. Decolonization consisted of a chlorhexidine shower the day before or the day of surgery and intranasal application of povidone-iodine within two hours before surgery. Additional bundle components included the use of colored inner gloves during auto-graft bone preparation to detect glove tearing, and additional sterile drapes when using a C-arm. The intervention was accompanied by staff education, promotion activities, awareness surveys, and ongoing monitoring. SSI rates were compared between the pre-intervention period (January-November 2023) and post-intervention period (December 2023 – October 2024) in orthopedic patients and further compared with neurosurgical surgery to evaluate the intervention's effectiveness. Pediatric patients who underwent scoliosis surgery and patients with infections present at the time of surgery (PATOS) were excluded from the study. Diagnosis was based on the updated 2023 CDC/NHSN (National Healthcare Safety Network) definitions. **Result:** In the orthopedic department, the SSI rates significantly decreased from 2.65% (14/529) before the intervention to 0.34% (1/295) after the intervention (p=0.01). In the non-intervention neurosurgery department, there was no significant difference in SSI rates between the two periods (3.05% [12/393] vs. 2.16% [5/231], p=0.62). Although the post-intervention SSI rates in orthopedics were lower than that in neurosurgery (0.34% vs. 2.16%), the difference was not statistically significant (p=0.09). The SSI rates caused by Staphylococcus spp. in orthopedics decreased from 2.27% (12/529) before the intervention to 0% (0/295) after the intervention (p=0.01). In neurosurgery, there was no significant change in the incidence of SSIs caused by Staphylococcus spp. between the two periods (1.53% [6/393] vs. 1.30% [3/231], p<0.99). **Conclusion:** The enhanced SSI prevention bundle, which included S. aureus decolonization therapy, effectively reduced the SSI rate in orthopedic fusion surgeries. This effect was not observed in the neurosurgery department without the intervention, supporting the effectiveness of the implemented bundle.

Figure 1. Trends in SSI incidence rates During the Pre- and Post-Intervention Periods



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The SSI Standstill: Are Stagnant SSI Rates Limited to CMS-Mandated Procedures?‡

Arielle Cohen[1], Brittain Wood[1], Polly Padgette[2], Valerie Payne[3], Linda Crane[4], Linda Roach[5], David Weber[6], Deverick Anderson[7] and Jessica Seidelman[1]
[1]Duke University; [2]Duke; [3]Duke Infection Control Outreach Network; [4]Duke University Medical Center; [5]Duke Ic Outreach Network; [6]University of North Carolina at Chapel Hill and [7]Duke Center for Antimicrobial Stewardship and Infection Prevention

Background: National Healthcare Safety Network (NHSN) data demonstrate substantial declines over time in most hospital-acquired infections (HAIs). In contrast, surgical site infection (SSI) rates have remained largely

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