included in estimates of HA-VRI, but the proportion of cases that are healthcare associated are substantial. Typical surveillance methods likely underestimate the burden of disease related to RSV, especially for those aged ≥50 years.

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Presentation Type:
Poster Presentation
Subject Category: Other

Facemasks for Source Control: Testing Influenza Transfer to Bedside Tables

Adriane Biggio and Stephanie Nagy-Agren

Background: Research testing human study participants regarding the effectiveness of face masks in preventing influenza transfer or transmission is limited. In this pilot study, we investigated the following question: In influenza-positive veterans, what is the effect of face-mask wearing in comparison to not wearing a face mask on influenza transfer to bedside tables measured for 2 hours per condition over a 10-week period during the 2019–2020 influenza season **Methods:** Influenza-positive veterans with influenza symptom onset ≤ 120 hours admitted to the Salem Veterans Affairs Medical Center were recruited to participate in this study. Exclusion criteria included critical illness requiring an oxygen mask or intubation. The Precept® FluidGard® 160 Procedure Mask 15300, Precept Medical Products, Inc., Arden, NC was worn by all participants during the two-hour intervention period. Surface swabs were used to measure the presence of influenza on bedside tables. CDC/NIOSH tested for influenza A and B from surface samples and facemasks using real-time polymerase chain reaction (PCR) assay (TaqMan ThermoFisher Scientific). Demographic information was collected (Table 1). A study questionnaire collected qualitative data on tolerability and feasibility of wearing a facemask when hospitalized with influenza. Institutional Review Board approval was granted. **Results:** From January 2, 2020, to March 11, 2020, 8 participants completed the study. Mean age was 67 years, all were male. Of these 8 participants, 6 had influenza A and 2 had influenza B. Half were diabetic; all received oseltamivir. Relative room humidity ranged from 15.6% to 39.8%. Neither influenza A nor B was detected by qPCR on bedside tables for any of the 8 participants under either face-mask–wearing condition. All participants reported that wearing the face mask was easy or very easy; of these, 5 reported experiencing warmth from the mask. Also, 50% of participants selected 2 hours as the time they could tolerate wearing a mask; the other 25% specified they could wear the face mask for 3 hours or 5 hours or more, respectively. **Conclusions:** In this pilot study, we demonstrated that wearing face masks is a tolerable infection control practice for providing source control for inpatients with influenza and will guide future research. Because a major limitation was the small size of the study, associated with lack of viral capture, a larger study is planned. Using face masks for source control among inpatients with influenza and other respiratory virus infections should be considered a standard infection control practice.

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Table 1.

Participant age, influenza type, temperature, oseltamivir doses received, and pertinent medical history.

Participant	Age (years)	Influenza type	T_{max} on study date	Oseltamivir (# doses received)	Pertinent medical history
1	67	B	99.7	2	COPD, diabetes, cigarette smoking
2	72	A	98.5	2	
3	84	A	98.4	2	
4	86	B	98	2	
5	69	A	98.1	2	COPD, diabetes
6	70	A	98.4	2	pneumonia, COPD, cigarette smoking
7	59	A	98.4	4	
8	27	A	100.3	1	cigarette smoking

Table 2.

Number of hours tolerated facemask-wearing condition, general experiences wearing facemask, and opinion about ease or difficulty wearing the facemask

	N (%)
Two hours	4 (50)
Three hours	2 (25)
Five hours or more	2 (25)
Warmth	5 (62.5)
General discomfort	3 (37.5)
Shortness of breath	1 (12.5)
No discomfort	2 (25)
Easy or very Easy	8 (100)

Table 3.

Influenza A or B Detection on Nasopharyngeal Swabs, Masks, and Bedside Tables

N=8	Nasopharyngeal swab (total M1 copies in sample)	Worn mask	Before mask intervention	After mask intervention	Before unmasked intervention	After unmasked intervention
1	DNQ*	UD	UD	UD	UD	UD
2	2.40E+03	DNQ	UD	UD	UD	UD
3	46.0	UD	UD	UD	UD	UD
4	UD	NA	NA	NA	NA	NA
5	2.94E+03	DNQ	UD	UD	UD	UD
6	no sample	DNQ	NA	NA	NA	NA
7	2.64E+02	UD	UD	UD	UD	UD
8	UD	UD	NA	NA	NA	NA

DNQ = detectable but not quantifiable
*denotes influenza B
UD = undetected
NA = not assayed

Presentation Type:
Poster Presentation
Subject Category: SSI

Incidence and Risk Factors for Surgical Site Infection Following Coronary Artery Bypass Graft Procedures

Polly van den Berg; Sharon Wright and Baevin Feeser

Background: Deep and organ-space surgical site infections (SSIs) are serious complications of coronary artery bypass graft (CABG) procedures. It is unclear whether the use of bilateral versus single internal mammary artery (BIMA vs SIMA) and surgical approach to internal mammary artery (IMA) harvest (pedicled vs skeletonized) are independent risk factors for SSI. The use of BIMA grafting redirects blood flow away from the sternum to the heart and may increase SSI risk due to lower tissue perfusion. A skeletonized approach to graft harvest, wherein the IMA is dissected free of surrounding tissue to preserve collateral sternal blood flow, may decrease SSI risk as compared to a pedicled approach in which the IMA is mobilized within a tissue pedicle. We describe the incidence and potential risk factors for post-CABG SSI in an academic tertiary-care center performing ~500 IMA procedures annually. **Methods:** Data were abstracted on adult patients who underwent a CABG procedure using at least 1 IMA graft

Table 1: Changes in Post-CABG SSI Incidence and Surgical Technique, 2017-2020

Time Period	Total # CABG Procedures	Overall SSI/100 procedures	Surgical Approach n (%)		CABG type n (%)	
			Skeletonized	Pedicled	SIMA	BIMA
Jul 17 – Jun 18	550	1.8	160 (29.1)	390 (70.9)	426 (77.5)	124 (22.5)
Jul 18 – Jun 19	561	1.1	192 (34.2)	369 (65.8)	427 (76.1)	134 (23.9)
Jul 19 – Jun 20	480	0.63	189 (39.4)	291 (60.6)	391 (81.5)	89 (18.5)

CABG=coronary artery bypass graft, SSI=surgical site infection, SIMA=single internal mammary artery, BIMA=bilateral internal mammary artery

Table 2: Univariate Predictors of Deep and Organ/Space Post-CABG SSI

Variable n (%)	SSI (n=19)	No SSI (n=1533)	*p* value
Female gender	11 (57.9)	305 (19.9)	0.0003
Age ≥ 75	9 (60.0)	388 (26.4)	0.0065
Extreme Obesity (BMI ≥ 40)	4 (21.1)	63 (4.1)	0.008
White	15 (79.0)	1066 (69.5)	0.50
Diabetes	17 (89.5)	726 (47.4)	0.0002
Ever smoker	7 (36.8)	641 (41.8)	0.82
Pedicled harvest technique	14 (73.7)	1009 (65.8)	0.62
BIMA graft	6 (31.6)	334 (21.8)	0.28
Discharge to rehab	14 (77.8)	564 (36.8)	0.0007

CABG=coronary artery bypass graft, SSI=surgical site infection, BIMA=bilateral internal mammary artery

between July 2017 and June 2020. Additional data on potential risk factors for SSI were obtained electronically from hospital data marts and the Division of Cardiac Surgery database, including demographics, comorbidities, number of arterial grafts, surgical approach, surgeon, and discharge location. Using standard NHSN definitions, infection control practitioners identified post-CABG deep and organ-space SSIs. Patient and procedure characteristics were evaluated as potential risk factors for deep and organ-space SSI using the Fisher exact test. **Results:** Of 1,591 CABG procedures performed during the study period, 1,244 (78.2%) were performed using a SIMA technique and 347 (21.8%) were performed using a BIMA technique. The overall post-CABG SSI incidence was 1.2 per 100 procedures, with 1.0 SSIs per 100 SIMA procedures and 1.7 SSIs per 100 BIMA procedures. Table 1 demonstrates an increase over time in proportion of CABG procedures performed using SIMA and skeletonized IMA grafts. We also observed a decrease in overall SSI incidence over this period. See Table 2 for univariate predictors of post-CABG SSI. **Conclusions:** Female sex, BMI ≥40, age ≥75 years, diabetes, and discharge to a rehabilitation setting were associated with development of post-CABG SSI. Although the overall incidence of deep and organ-space SSI in our cohort was very low, making it difficult to draw conclusions about potentially modifiable risk factors, an increase in the use of SIMA and skeletonized grafts appears to be accompanied by a decrease in SSI incidence. More data from our institution and others are needed to determine the significance of this trend.

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Presentation Type:
Poster Presentation
Subject Category: SSI
The Impact of Narrowing Perioperative Antibiotic Prophylaxis for Left-Ventricular-Assist Device Implantation
Lauren Allen; Rachel Bartash; Kelsie Cowman; Yi Guo; Grace Minamoto; Snehal Patel; Sasha Vukelic; Daryl Nnani and Daphenie Fauvel

Background: Left-ventricular-assist device (LVAD)–related infections occur in 20%–40% of LVAD recipients and may result in up to 10% of LVAD-related deaths. Optimal surgical infection prophylaxis for LVAD implantation is not well defined. Our institution historically used a 4-drug surgical infection prophylaxis regimen of fluconazole, ciprofloxacin, rifampin, and vancomycin as recommended by the device manufacturer. In January 2020, a 2-drug surgical infection prophylaxis regimen of vancomycin and cefazolin was implemented to reduce broad-spectrum antibiotic use while preserving gram-positive coverage. The primary objective of this study was to compare LVAD-associated infection rates before and after changing surgical infection prophylaxis. **Methods:** A retrospective review of patients who underwent LVAD implantation between January 2018 and January 1, 2021, was performed. Definitions of LVAD-associated infections and non-LVAD infections were based on the International Society for Heart and Lung Transplantation guidelines. Infection rates at 2 weeks and 30 days after implantation and 30-day mortality were compared between the 4-drug surgical infection prophylaxis regimen (January 2018–December 2019) and the 2-drug regimen (January 2020–January 2021). Additional data collected included demographics, cause of cardiomyopathy, type of infection, and causative organism. **Results:** In total, 51 patients were in the 4-drug surgical infection prophylaxis group and 23 patients were in the 2-drug surgical infection prophylaxis group. Baseline characteristics between the groups were similar. The cause of cardiomyopathy in both groups was predominantly nonischemic (67% vs 70%, = .81), and most patients received a Heartmate III device (84% vs 100%, $P = .06$). There was no statistical difference between infection rates in the 4-drug and 2-drug prophylaxis groups at 2 weeks or 30 days (Table 1). The 30-day mortality rate was 4% in the 4-drug group versus 13% in the 2-drug group ($P = .17$). No deaths were due to infections. Gram-negative and fungal LVAD–associated infections were rare: 4% versus 4% ($P = .99$) for gram-negative infections and 2% versus 0% ($P = .99$) for fungal infections. The most commonly isolated organisms were *Staphylococcus aureus* and coagulase-negative *Staphylococcus* in both groups. Pneumonia was the most common infection in both groups (Figure 1). **Conclusions:** We did not observe a significant increase in infection or mortality with narrowing of perioperative antibiotics. However, these results should be interpreted cautiously given the small sample size. Larger studies are needed to confirm these findings.

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Disclosures: None

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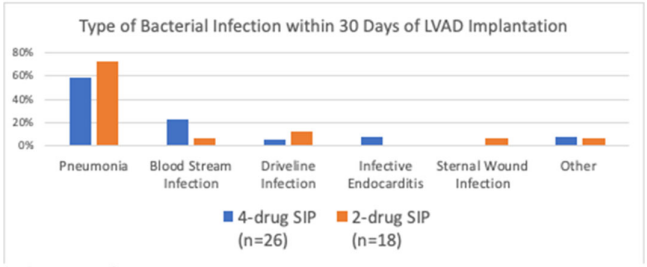
Table 1. Infection rate among LVAD recipients receiving 4-drug vs 2-drug SIP

	2-week			30-day		
	4-drug (N=51)	2-drug (N=23)	P-value	4-drug (N=51)	2-drug (N=23)	P-value
Number of Patients with Infection, n (%)	16(31)	11(48)	0.17	18(35)	12(52)	0.17
Number of Patients with LVAD-Associated Infection, n (%)	7(13.7)	1(4.3)	0.42	9(17.6)	4(17.4)	0.99

Figure 1. Type of Infection



*4-drug SIP: 26 infections among 51 patients
* 2-drug SIP: 18 infections among 23 patients
# Several patients had more than 1 infection

Presentation Type:
Poster Presentation
Subject Category: Surveillance/Public Health
Prevalence of Healthcare-Associated Infections at the National Hospital During the COVID-19 Pandemic in Peru
Jussara Huamani and Walter Prudencio

Background: Healthcare-associated infections are important because they constitute a public health problem due to the increase in morbidity and mortality that they produce in hospitalized patients, increased hospitalization costs due to prolonged stay, expensive antibiotic treatments and surgical reinterventions, not counting the social costs due to loss of wages and production, among others. **Methods:** We report the specific prevalence of healthcare-associated infections (HCAIs) in Edgardo Rebagliati Martin National Hospital, Perú, in 2020. We performed a descriptive cross-sectional study from July 27 to July 31, 2020. The medical records of hospitalized patients were reviewed according to the inclusion criteria. STATA software was used for descriptive statistical analyses. **Results:** In total, 1,217 hospitalized patients were included in the study. The prevalence of HCAI was 12.2% (149 patients). The prevalence of HCAI in areas where patients with the diagnosis of COVID-19 were hospitalized was higher (8.1%) than in common hospitalization areas (4.1%). Men represented 92% of the total