Table 1. Basic Demographics by those with and without carbapenmase

	Total n= 284	Carbapenemase (CP) n= 171 (60.2%)	No Carbapenemase (non-CP) n= 113 (39.8%)
Age, median (IQR)	68 (56–77)	67 (52–74)	70 (60-80)
Female, n (%)	172 (60.6%)	92 (53.8%)	80 (70.8%)
Race, n (%)			
Black	145 (51.1%)	105 (61.4%)	40 (35.4%)
White	112 (39.4%)	50 (29.2%)	62 (54.9%)
Asian or Pacific Islander	10 (3.5%)	4 (3.5%)	6 (3.5%)
Ethnicity, n (%)			
Hispanic	5 (1.8%)	2 (1.2%)	3 (2.7%)
Non-Hispanic	230 (81.9%)	137 (80.1%)	93 (82.3%)
Charlson Comorbidity Index Score, median (IQR)	2 (1–4)	2 (1–4)	2 (1-3)
Hospitalized n (%)	183 (64.9%)	114 (67.5%)	69 (61.1%)
Length of Stay, median (IQR)	11 (5–24)	11 (6–24)	10 (5-26)
Intensive Care Unit Admission Prior to culture, n (%)	32 (11.7%)	18 (10.4%)	14 (13.0%)
Immunocompromised, n (%)	49 (17.3%)	23 (13.5%)	26 (23.0%)
HIV or AIDS, n (%)	6 (2.1%)	6 (3.5%)	0
Transplant (solid organ), n (%)	2 (0.7%)	0	2 (1.8%)
Solid Tumor, n (%)	26 (9.2%)	12 (7.0%)	14 (12.4%)
Metastatic Cancer, n (%)	12 (4.2%)	6 (2.1%)	6 (5.3%)
Hematologic Malignancy, n (%)	6 (2.1%)	4 (2.4%)	2 (1.8%)
Cirrhosis	2 (0.7%)	0	2 (1.8%)
Specimen Source, n (%)			
Blood	40 (14.1%)	25 (14.6%)	15 (13.3%)
Urine	234 (82.4%)	143 (83.6%)	91 (80.5%)
Peritoneal fluid	5 (1.8%)	2 (1.1%)	3 (2.7%)
Other	5 (1.8%)	1 (0.6%)	4 (3.5%)
Organism, n (%)			
Escherichia coli	47 (16.6%)	17 (10.0%)	30 (26.6%)
Enterobacter cloacae	50 (17.7%)	8 (4.7%)	42 (37.2%)
Klebsiella aerogenes	13 (3.6 %)	1 (0.6%)	12 (10.6%)
Klebsiella pneumoniae	172 (60.8%)	144 (84.7%)	28 (24.8%)
Klebsiella oxytoca	1 (0.4%)	0	1 (0.9%)
Polymicrobial Infection, n (%)	84 (29.8%)	61 (35.7%)	23 (20.7%)
History, n (%)			
Previous stay in hospital (1 year)	215(75.7%)	142 (83.0%)	73 (64.6%)
Previous stay in long term care facility (1 year)	143 (50.4%)	106 (62.0%)	37 (32.7%)
Previous stay in long term acute care (1 year)	39 (13.7%)	36 (21.1%)	3 (2.7%)
Surgery	85 (29.9%)	47 (27.5%)	38 (33.6%)
Chronic Dialysis	30 (10.6%)	24 (14.0%)	6 (5.3%)
Previously Isolated same organism (1 year)	29 (10.4%)	27 (16.0%)	2 (1.8%)
Indwelling Devices, n (%)			
Any	200 (70.4%)	139 (81.3%)	61 (54.0%)
Central line	91 (72.8%)	69 (49.6%)	32 (51.6%)
Urinary Catheter	148 (84.1%)	112 (80.6%)	36 (58.1%)
Both Trach and PEG	45 (15.9%)	42 (28.1%)	6 (9.8%)
Positive for CP by CDC on WGS (out of 228 tested)	177		
Postive for CP on Bactopia (out of 96 tested)	23		
Postive by either WGS n(%)	200 (61.9%)		
90-day Mortality	72 (25.4%)	44 (25.7%)	28 (24.8%)
In-hospital Mortality	19 (6.7%)	12 (7.0%)	7 (6.2%)

Missing values: Race – 17, Ethnicity - 49, Charlson Comorbidity Index – 6, Hospitalized - 2, Polymicrobial - 2, Organism source - 9, Organism type - 1, Intensive care unit prior -10, Hospital mortality 6, Previously isolated organism- 6

Abbreviations: IQR – Interquartile Range, PEG – Percutaneous Endoscopic Gastrostomy

Species	CP-CRE (%)	Carbapenemase genes (n)
Klebsiella pneumoniae	143 (83.1%)	KPC-2 (18), KPC-3 (119), KPC-38 (1), NDM-1 (1), NDM-4 (1), NDM-5 (2), NDM-9 (1)
Escherichia coli	17 (36.2%)	KPC-2 (1), KPC-3 (13), KPC-4 (1), NDM-5 (2)
Enterobacter cloacae	8 (16.0%)	KPC-3 (4), KPC-4 (3), IMP-13 (1)
Klebsiella aerogenes	1 (7.7%)	KPC-3 (1)

novel associations (eg, lower age, male sex, infection with *Klebsiella pneumoniae*, and indwelling medical devices) that infection preventionists could use to target high-risk patients for screening or isolation prior to CP-CRE detection.

Disclosure: None

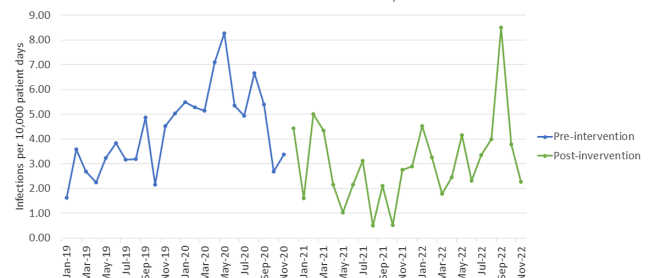**Presentation Type:**
Poster Presentation - Top Poster Award
Subject Category: MRSA/VRE
Impact of discontinuation of contact precautions on surveillance- and whole-genome sequencing-defined MRSA infections
Sharon Karunakaran; Lora Pless; Ashley Ayres; Carl Ciccone; Joseph Penzelik; Alexander Sundermann; Elise Martin; Marissa Griffith; Kady Waggle; Lee Harrison and Graham Snyder

Background: Current guidelines recommend contact precautions to prevent transmission of methicillin-resistant *Staphylococcus aureus* (MRSA) in acute-care hospitals. Prior literature demonstrates that discontinuation of contact precautions for MRSA has not been associated with an increase in carriage rates including surveillance-defined healthcare-associated infection (HAI) while horizontal infection prevention strategies are implemented. **Objective:** To analyze the impact of discontinuation of contact precautions on the rate of MRSA infections, including surveillance-defined HAI and transmission events identified through whole-genome sequencing (WGS) surveillance. **Methods:** In this single tertiary-care center, retrospective, observational, quality improvement analysis, we measured 2 MRSA HAI outcomes before and after discontinuation of contact precautions (ie, gown and gloves no longer required for care of patients with prior or current MRSA infections or colonization, effective December 2, 2020). First, we conducted a time-series analysis using linear regression modelling of NHSN reported MRSA HAI rates (January 2019–November 2022). We also calculated the frequency of WGS-confirmed MRSA transmission events before in the discontinuation of contact precautions (January 2019–August 2019) and after the discontinuation of contact precautions (January 2022–November 2022) periods. Surveillance HAI events were determined using NHSN definitions; MRSA transmission events were defined as an isolate identified ≥3 days after hospitalization or within 30 days of a healthcare exposure, genetically related by ≤15 single-nucleotide polymorphisms compared to ≥1 previously sequenced MRSA isolate. **Results:** We identified 171 MRSA HAIs in the 23 months before discontinuation of contact precautions, corresponding to 4.24 HAI per 10,000 patient days, and 129 HAIs in the 24 months after discontinuation of contact precautions, corresponding to 3.01 HAI per 10,000 patient days (Fig.). We detected a nonsignificant change in the trend in HAI rate before and after discontinuation of contact precautions ($P = .22$) as well as a significant immediate decrease in the MRSA HAI rate ($P < 0.001$) at the time of discontinuation of contact precautions. In the WGS analysis 8 months before discontinuation of contact precautions, 11 MRSA transmission events were confirmed, comprising 4 clusters (0.75 per 10,000 patient days). In the WGS for the 11-month analysis period after discontinuation of contact precautions, there were 23 confirmed MRSA transmission events comprising 10 clusters (1.22 per 10,000 patient days; incidence rate ratio, 1.61; 95% CI, 0.75–3.66; $P = .19$). **Conclusions:** After discontinuation of contact precautions, there was no significant increase in MRSA HAI or transmission events. Further evaluation of the individual WGS

Figure: Methicillin-resistatant *Staphylococcus aureus* healthcare-associated infections before and after discontinuation of contact precautions

transmission clusters will be helpful to determine whether discontinuation of contact precautions led to MRSA transmission in this facility in the period after discontinuation of contact precautions.

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Presentation Type:
Poster Presentation - Top Poster Award
Subject Category: Other
Overview of infection control in nursing research in Korea over the last 10 years: Text network analysis and topic modeling
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Background: With the emergence of new infectious diseases, infection control nursing (ICN) in hospitals has become increasingly significant. Consequently, research on ICN has been actively performed. We examined the knowledge structure and trends addressed in Korean ICN research. **Methods:** From 5 web-based Korean academic databases (DBpia, KISS, KMbase, KoreaMed, and RISS), 2,244 studies published between 2013 and 2022 were retrieved using ICN-related search terms (eg, "nurse" or "nursing" along with "infection control," "infection prevention," "health-care-associated infection," or "standard precautions"). After deleting duplicates, the authors assessed titles and abstracts and included 250 research abstracts in this study. Using NetMiner 4.4 software (Cyram, Seoul, Korea), words from abstracts of published articles were extracted and refined, then text network analysis and topic modeling were performed. A text network was structured based on the co-occurrence matrix of key words (semantic morphemes) and was analyzed to identify the main key words. Through topic modeling using the Latent Dirichlet Allocation algorithm, latent topics in the research abstracts were extracted. The authors verified the key words comprising the topic and the result of classifying the documents by topic and named topics. **Results:** The number of