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Background. Information on the most current status of antimicrobial resistance (AMR) in local and national levels has critical importance. However, collection and analysis of a large number of antimicrobial susceptibility test (AST) results often results in additional workload in healthcare facilities and latency in final reporting. We sought to develop an automated nationwide surveillance network in Korea.

Methods. Data collection servers were set up at each participating institutions, which collects AST results of every bacterial isolate from blood, cerebrospinal fluids, urine, and respiratory specimens. Collected results are anonymized and transmitted to central data server every day without human input. End-user can perform various analyses using data warehouse server through web interface. Only first isolates of same species from individual patients were included in analysis.

Results. A total of 19 hospitals located in various regions in Korea participated to the network. From January 2015 through December 2017, AST results of 347,356 isolates were collected. The proportion of MRSA among *S. aureus* (n = 17,761) was 65.3%, which declined gradually from 71.5 to 62.3% during study period (P < 0.001). The proportion of VRE increased from 29.3 to 36.3% (P = 0.001). Resistance rates of *E. coli* (n = 63,628) to third and fourth generation cephalosporins, fluoroquinolone, and piperacillin–tazobactam were 31.6, 23.0, 44.0, and 4.2%, respectively. Resistance rates of *K. pneumoniae* (n = 16,875) to same classes were 32.2, 28.1, 31.0 and 19.1%, respectively. Among *E. coli* and *K. pneumoniae*, 0.4 and 4.3% were resistant to carbapenem. Resistance rates of *P. aeruginosa* (n = 12,895) to carbapenem was 30.5%. However, 72.7% of *A. baumannii* isolates (n = 9,885) were resistant to carbapenem. Colistin resistance rate was still low at 0.5%.

Conclusion. We have established a fully automated nationwide surveillance network for AMR in Korea. Our system provided data on the most current status of AMR, which revealed increase in resistance rates among major Gram-negative pathogens compared with previous studies.

Figure 1. Schematic diagram of the Korean Antimicrobial Resistance Surveillance Network (KARSNet).

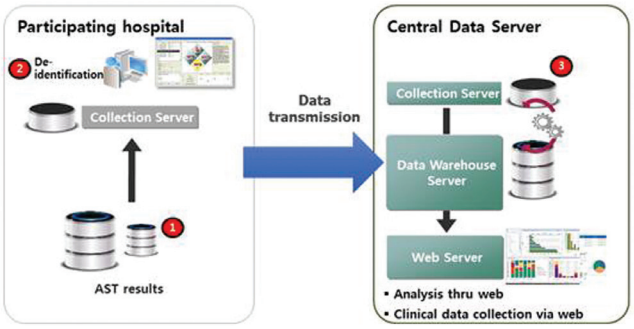


Figure 2. Temporal trends of the resistance rates of *S. aureus* and *E. faecium*.

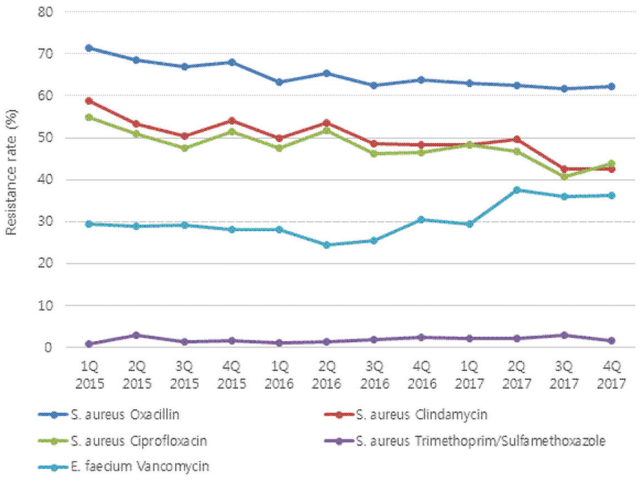
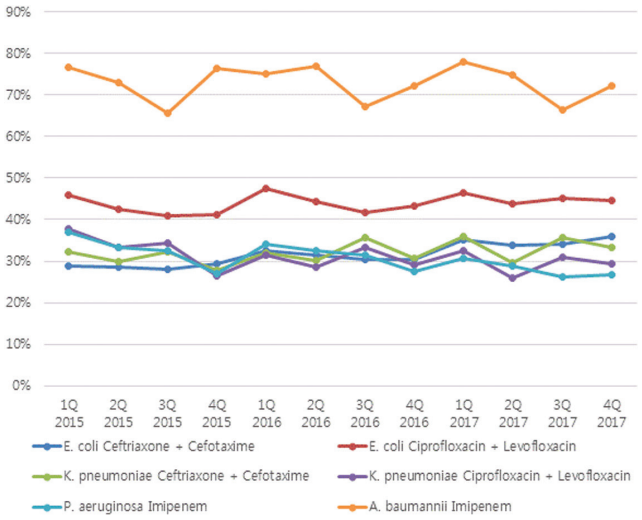


Figure 3. Temporal trends of the resistance rates of major Gram-negative species.



Disclosures. **All authors:** No reported disclosures.

2150. Discontinuation of *Vancomycin-Resistant Enterococci* (VRE) Surveillance and Contact Isolation in ICU and Transplant Units

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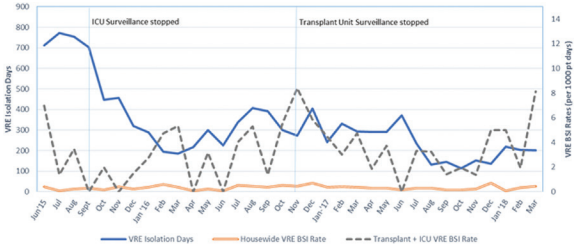
Background. The utility of active surveillance and contact isolation of VRE colonized individuals has not been established in non-outbreak and hyperendemic settings. The practice is onerous and resource intensive, with a hospital wide impact on patient flow. There is growing body of evidence suggesting that routine isolation of VRE colonized patients may not be beneficial. At MSKCC, VRE colonization rates in BMT and ICU units are ~ 33%, individuals with colonization only account for 80 % of all new VRE cases. Active surveillance had not shown any significant reduction in incident VRE. The objective of this study was to analyze the first year after discontinuation of active surveillance and routine contact precautions for VRE in the ICU. Outcomes assessed were house wide VRE BSI rate, unit specific BSI rates, and VRE-related nosocomial outbreaks. VRE-specific isolation days were simultaneously monitored.

Methods. Beginning in September 2015, we discontinued active VRE surveillance and isolation of colonized individuals in our 20 bed ICU, followed a year later by our 25-bed transplant unit. VRE BSI rates were observed for a 12-month period following these changes.

Results. The baseline house wide VRE BSI rate was 0.31/1,000 patient days. After discontinuation of practice in ICU, the ICU rate remained unchanged over the following 12 months (pre: 0.88/1,000 patient days vs. post: 0.77/1,000 patient days; P value = 0.83). No significant difference was seen in house wide or unit specific rates after the policy was subsequently implemented in the BMT unit (Figure 1). No VRE-related outbreaks were detected. There was a 50% absolute reduction in isolation days for VRE between the pre- and post-intervention periods.

Conclusion. Discontinuation of active surveillance and contact isolation of colonized individuals did not result in an increase in incidence of VRE BSI rates in a hyperendemic setting. A reduction in isolation beds facilitated patient flow, especially access to critical care services.

Figure 1



Disclosures. **All authors:** No reported disclosures.

2151. Accuracy of Physician Adjudication of Infection in Patients with Systemic Inflammatory Response Syndrome (SIRS)

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Background. The definition of sepsis evolves with improved understanding of the pathophysiology, but the presence of infection remains essential for the diagnosis. Despite this fact, there are currently no universal objective definitions for infections, which increases the variability in sepsis diagnoses. This variation makes interpretation of diagnostic studies, therapeutic interventions, and prognostic tools challenging. In this study, we compared physician adjudication of infection to standardized definitions of infection in patients meeting two of four Systemic Inflammatory Response Syndrome (SIRS) criteria.

Methods. In a prospective observational study performed in two academic medical centers, patients with two of four SIRS criteria were enrolled in Emergency Departments from February 2016 to December 2016. Diagnostic and physiologic data were abstracted for 151 patients at admission. Each medical record was independently reviewed by one Emergency Medicine and one critical care (CC) physician from a 10-member adjudicating committee to determine the presence of infection. In the case of disagreement, a third CC physician served as the tiebreaker. Objective definitions of infection were derived from consensus surveillance definitions.

Results. Overall, both adjudicators and the objective definitions agreed on the presence of infection 93% of the time and on the absence of infection 82.7% of the time. Of the patients adjudicated as indeterminate or not infected, eight and 13 met one objective definition of infection, respectively. The greatest discordance between physician adjudicated infection and objective definitions occurred in pneumonia patients (Table 1).

	Physician Adjudication		
Objective definition of infection	Infected	Indeterminate	Not infected
Not infected	4	11	62
Infected (*Pneumonia)*	53	8 (5)	13 (4)
Total	57	19	75

Conclusion. Implicit to the definition of sepsis is the presence of infection. Therefore, standardized methods of defining infections are necessary to decrease the variability in diagnoses and allow comparability among clinical trials. The application of objective definitions could prove to be a reproducible and reliable foundation for use by clinical investigators.

Disclosures. **All authors:** No reported disclosures.

2152. Epidemiology and Clinical Outcomes of Contemporary, Third-Generation Left Ventricular Assist Device (LVAD) Infections

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Background. Infection is a common complication following implantation of an LVAD. The purpose of this study was to characterize the epidemiology and clinical outcomes of infections in patients who received the HeartWare LVAD, a newer intrapericardial device.

Methods. Adult patients with a HeartWare LVAD implanted between 2009 and 2017 at Michigan Medicine were screened for inclusion. LVAD-associated infection was defined using INTERMACS criteria. Patients were followed from device implantation to either infection, death, heart transplantation, device exchange, or last known follow-up to date. Exclusions included implantation of a right-sided VAD, alone or in combination with an LVAD. The primary outcomes were the incidence of LVAD-associated infections per 1,000 device days and per 100 person-years.

Results. Of the 183 patients included, 43 (23.5%) developed an LVAD-associated infection with incidence rates of 0.39 infections per 1,000 device days and 14.3 infections per 100 patient years. The median time to infection was 305 days (IQR, 172–581). *Staphylococcus* spp. (26%) and *Streptococcus* spp. (20%) were the most common causative pathogens identified. The results of a univariate analysis for infection are shown in Figure 1. There were no statistically significant differences in all-cause mortality (40% vs. 17%, $P = 0.08$) and incidence of heart transplantation (19% vs. 34%, $P = 0.09$) between those with infection and those without infection; the number of hospital readmissions were more common in patients with infection (median, 4 vs. 2, $P < 0.01$).

Conclusion. LVAD-associated infection remains a major complication among recipients of the HeartWare LVAD, with about one-quarter of patients developing infection over time despite improved device design. Infection contributes to the increased hospitalizations seen in this population.

Figure 1. Comparison of Baseline Characteristics Between Patients with LVAD-Associated Infections and Non-Infected Patients

	Infected (n=43)	Non-infected (n=140)	P-value
Age[1]	59 (50-67)	57 (44-63)	0.01
Sex, Male[2]	34 (79)	104 (74)	0.69
Caucasian[2]	33 (77)	111 (79)	0.83
INTERMACS Profile[3]	2.9±0.7	2.5±1.0	0.02
Bridge to Transplant[2]	25 (58)	80 (57)	>0.99
Ischemic Cardiomyopathy[2]	21 (49)	58 (41)	0.52
Diabetes[2]	22 (51)	38 (27)	0.01
Previous Sternotomy[2]	14 (33)	30 (21)	0.16
Antibiotic Prophylaxis[2]	22 (51)	58 (41)	0.49
Device Days[1]	305 (172-581)	490 (263-905)	0.02

[1]median (interquartile range) [2]number (%) [3]mean±SD

Disclosures. **All authors:** No reported disclosures.

2153. Impact of Norovirus Testing Changes on Hospital-Acquired Norovirus Infections

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Background. Norovirus is highly contagious and can spread rapidly through healthcare facilities. Controlling transmission of norovirus infections can be challenging. Early diagnosis allows for infection prevention measures to be implemented in a timely manner. The objective of this study was to determine the effect of decreasing barriers to norovirus testing on hospital-acquired (HA) cases.

Methods. A before-after study was conducted evaluating the impact of increasing the availability of norovirus testing on HA infections. From January

1, 2012 to October 16, 2017, all norovirus tests required the approval from the laboratory medicine resident, and testing was performed once a day. A polymerase chain reaction (PCR) system that required a two-step process was used. On October 17, 2017, the laboratory began using a PCR that performs testing in one step, allowing the laboratory to perform testing more frequently. Approval of the laboratory medicine resident was no longer required. HA norovirus rates and percent of positive test pre and post-implementation were compared using chi-square analysis. HA cases were defined as patients admitted without signs or symptoms of norovirus infection on inpatient units. A Mann–Whitney *U* test was used to compare the average of HA infections per cluster pre and post-implementation. A cluster was defined as two or more associated cases. No other infection prevention interventions were implemented during this time frame.

Results. After implementation of the new testing methodology, there was no difference in percent of positive norovirus test between the study periods [9.4% (46/487) pre-implementation vs. 6.9% (11/160) post-implementation, $P = 0.16$]. The proportion of norovirus infections that were HA increased slightly after implementation [37% (17/46) pre-implementation vs. 55% (6/11) post-implementation, $P = 0.16$]. There was no difference in HA norovirus infections associated with a cluster between the study periods [3.6 cases/cluster pre-intervention vs. 2.5 cases/cluster post-intervention, $P = 0.86$)

Conclusion. There was no significant difference in the number of HA norovirus cases with improved testing availability. A limitation to this study is the short length of the post-implementation evaluation period compared with the pre-implementation period.

Disclosures. **All authors:** No reported disclosures.

2154. How Well Are We Estimating the True Burden of Acute Gastroenteritis? Validation of Acute Gastroenteritis-Related ICD Codes in Pediatric and Adult U.S. Populations

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