improved communication with internal and external stakeholders, more collaborative team discussions, increased confidence in recommendations, expanded provider and staff engagement, and increased leadership involvement. **Conclusions:** In addition to improved knowledge and understanding for a variety of AS-related areas, attendees of the conference also reported a high rate of practice changes that led to perceived improvements in patient outcomes and team function.

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Antibiotic Stewardship
Antimicrobial Use Rates by Patient Care Units using NHSN Antimicrobial Use Option in TN Reporting Facilities, 2015–2023
Dr. Dipen M Patel, Tennessee Department of Health; Glodi Mutamba, Tennessee Department of Health; Callyn Wren, Tennessee Department of Health and Christopher Evans, Tennessee Department of Health

Background: Tracking antimicrobial use (AU) is a Core Element of Hospital Antimicrobial Stewardship Programs and important to help curb the public health threat of antimicrobial resistance. The National Healthcare Safety Network's (NHSN) AU Option serves as a way for facilities, healthcare systems, and health departments to track and report AU rates within their jurisdictions. Many analyses at the state and national levels do not assess unit-level AU rates. This study investigates AU rates among patient care units in Tennessee reporting facilities from 2015 to 2023 and the most frequently used antimicrobial agents based on AU rates within select unit types. **Methods:** A retrospective analysis was conducted utilizing data obtained from the NHSN AU Option for inpatient units in Tennessee acute care hospitals. Units were defined as critical care (including neonatal), ward, oncology ward, stepdown, operating room (OR), and mixed acuity and specialty care areas, termed 'other'. Unit types with fewer than five facilities represented were excluded. AU rates were determined by Antimicrobial Days of Therapy (DOT) per 1000 Days Present (DP). Statistical analyses , including descriptive statistics and comparison among the units by ANOVA test , were calculated using SAS Version 9.4. **Results:** Eighty-three facilities reported at least one month of data into the NHSN AU Option between 2015–2023. Among 70 facilities reporting inpatient units, the highest AU rate was observed in oncology ward units (n=12, 1114.6 DOT/1000 DP). A significant difference in AU rates was observed between oncology ward units compared to different unit types (p < 0 .001). Vancomycin, ceftriaxone, and piperacillin/tazobactam were the most used antimicrobials with AU rates of 83, 76, and 65 DOT/1000 DP, respectively. Vancomycin AU rates were significantly higher in oncology ward units compared to stepdown, ward, other, and OR units (p < 0 .0001). Ceftriaxone AU rate was significantly higher in stepdown units compared to oncology ward, other, and OR units (p < 0 .0001). Piperacillin/tazobactam AU rate was significantly higher in critical care units compared to different unit types (p < 0 .0001). **Conclusion:** During the study period, the AU rate varied across hospital inpatient units in Tennessee, with the highest AU rate in oncology wards. This unit-specific approach is critical to address the diverse antimicrobial prescribing behaviors observed, indicating that interventions should be customized to each unit's distinct antimicrobial usage patterns for successful stewardship efforts. Targeted strategies focused on individual wards rather than facility-wide initiatives appear essential for effective reduction in antibiotic usage.

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Antibiotic Stewardship
Long-term effect of intravenous antimicrobial use in a pharmacist-led ASP at a small Japanese acute care hospital
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Background: Antimicrobial resistance (AMR) remains a crucial, healthcare issue for which many countries have devised a national action plan. In Japan as well, antimicrobial stewardship programs (ASP) are being implemented in acute care hospitals under this policy framework. Clinical pharmacists play a central role in ASP, often jointly with infectious disease (ID) physicians. However, in Japan, a shortage of ID physicians has resulted in some ASP being led solely by pharmacists. While reports of the short-term effects of this situation are emerging, the long-term impact of pharmacist-led ASP is still largely unknown in Japan. The present study retrospectively examined the long-term effects of pharmacist-led ASP in a small, Japanese, acute care hospital. **Method:** The present study examined a pharmacist-led ASP in an acute care hospital (287 beds) in Japan which was launched in August 2015 and assessed the duration of therapy per 1000 patient-days (DOT) as the primary outcome by comparing the pre-intervention period (April 2013-July 2015) with the intervention period (August 2015-March 2023) using linear regression analysis. Additionally, segmented time-series analysis was conducted for each, additional intervention, and the impact of reduced activity due to the coronavirus disease 2019 (COVID-19) pandemic during the intervention. The DOT at the study center were compared with the national average of facilities implementing ASP. **Result:** While the DOT for all intravenous antimicrobials showed a slight increase on linear regression (r=0.01; P=0.1), the DOT of antipseudomonal intravenous antimicrobials significantly decreased (r=-0.027; P < 0 .01). Moreover, a significant reduction in DOT was observed immediately after the initiation of prospective review and feedback for carbapenems and daily prospective review and feedback for all intravenous antimicrobials (-3.2 and -2.4; P < 0 .001 for the intercept). An increase in DOT was observed during the COVID-19 pandemic-related reduction in activity time, and a rapid decline was observed upon the resumption of activities. Conversely, the average, nationwide DOT significantly increased for all intravenous antimicrobials as well as for antipseudomonal intravenous antimicrobials (r=0.02 and r=0.004; P < 0 .01) **Conclusion:** Sustaining an effective, pharmacist-led antimicrobial stewardship program led to a continual decrease in the DOT of antipseudomonal intravenous antimicrobials in a small, Japanese, acute care hospital despite a nationwide increase in their use following implementation of the national AMR action plan. Detailed analysis of pharmacists' activities across multiple facilities is necessary to verify these effects.

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Antibiotic Stewardship
Nationwide analysis of antimicrobial prescription in Korean hospitals between 2018 and 2021: The 2023 KONAS report
Yong Chan Kim, Yongin Severance Hospital; I Ji Yun, Yongin Severance Hospital; Hyo Jun Park, SNUBH; Jungmi Chae, SNUBH; Hyungsook Kim, SNUBH; Song Mi Moon, SNUBH; Eunjeong Heo, SNUBH; Se Yoon Park, Ajou University Hospital Pharmacy; Dong Min Seo, Ajou University Hospital Pharmacy; Ha-Jin Chun, Ajou University Hospital Pharmacy; Myung Jin Lee, Yonsei University College of

Medicine; Kyungmin Huh, Yonsei University College of Medicine; Su Jin Jeong, Yonsei University College of Medicine; Jun Yong Choi, Yonsei University College of Medicine and Bongyoung Kim, Hanyang University

Background: Data on antimicrobial use at the national level is crucial to establish domestic antimicrobial stewardship policies and enable medical institutions to benchmark against each other. This study aimed to analyze antimicrobial use in Korean hospitals. **Methods:** We investigated the antimicrobials prescribed in Korean hospitals between 2018 and 2021, using data from the Health Insurance Review and Assessment. Primary care hospitals (PCHs), secondary care hospitals (SCHs), and tertiary care hospitals (TCHs) were included in this analysis. Antimicrobials were categorized according to the Korea National Antimicrobial Use Analysis System (KONAS) classification, which is suitable for measuring antimicrobial use in Korean hospitals. **Results:** Out of more than 1,900 hospitals, PCHs and TCHs represented the largest and lowest percentage of hospitals, respectively. The most frequently prescribed antimicrobial in 2021 was piperacillin/β-lactamase inhibitor (9.3%) in TCHs, ceftriaxone (11.0%) in SCHs, and cefazedone (18.9%) in PCHs. Between 2018 and 2021, the most used antimicrobial class according to the KONAS classification was 'broad-spectrum antibacterial agents predominantly used for community-acquired infections' in TCHs and SCHs, and 'narrow spectrum beta-lactam agents' in PCH. Total consumption of antimicrobials has

Table 1. Korea National Antimicrobial Analysis System (KONAS) antimicrobial classification.

Category	Antimicrobials
Broad-spectrum antibacterial agents predominantly used for hospital-onset infections	Amikacin(IV), Cefepime, Cefoperazone/sulbactam, Cefpirome, Ceftazidime, Doripenem, Imipenem, Imipenem and cilastatin, Meropenem, Piperacillin/sulbactam, Piperacillin/tazobactam, and Tobramycin(IV)
Broad-spectrum antibacterial agents predominantly used for community-acquired infections	Aztreonam, Cefcapene, Cefdinir, Cefditoren, Cefetamet, Cefixime, Cefodizime, Cefotaxime, Cefpiramide, Cefpodoxime, Ceftizoxime, Ceftriaxone, Ciprofloxacin, Ertapenem, Gemifloxacin, Levofloxacin, Lomefloxacin, Moxifloxacin, Norfloxacin, Ofloxacin, Tosufloxacin, and Zabofloxacin
Antibacterial agents predominantly used for resistant gram-positive infections	Daptomycin, Linezolid, Teicoplanin, and Vancomycin(IV)
Narrow spectrum β-lactam agents	Amoxicillin, Amoxicillin and beta-lactamase inhibitor, Amoxicillin/clavulanate, Amoxicillin/sulbactam, Ampicillin, Ampicillin/sulbactam, Benzathine benzylpenicillin, Benzylpenicillin, Cefaclor, Cefadroxil, Cefalexin, Cefamandole, Cefazedone, Cefazolin, Cefbuperazone, Cefmetazole, Cefminox, Cefotetan, Cefotiam, Cefoxitin, Cefprozil, Cefradine, Cefroxadine, Ceftezole, Cefuroxime, Flomoxef, Nafcillin, and Sultamicillin
Antifungal agents predominantly used for invasive candidiasis	Anidulafungin, Caspofungin, Fluconazole, and Micafungin
Antibacterial agents predominantly used for resistant gram-negative infections	Ceftolozane/tazobactam, Colistin, and Tigecycline

Table 2. Characteristics of participating hospitals

Year	2018	2019	2020	2021
No. of hospitals	1,946	1,941	1,974	1,962
Hospital size				
<100	947 (48.7%)	951 (49.0%)	988 (50.1%)	987 (50.3%)
100–299	769 (39.5%)	766 (39.5%)	763 (38.7%)	753 (38.4%)
300–599	141 (7.2%)	142 (7.3%)	141 (7.1%)	139 (7.1%)
600–899	60 (3.1%)	54 (2.8%)	54 (2.7%)	57 (2.9%)
900–1,199	18 (0.9%)	18 (0.9%)	19 (1.0%)	17 (0.9%)
≥1,200	11 (0.6%)	10 (0.5%)	9 (0.5%)	9 (0.5%)
Hospital type				
Tertiary care	42 (2.2%)	42 (2.2%)	42 (2.1%)	45 (2.3%)
Secondary care	319 (16.4%)	323 (16.6%)	326 (16.5%)	322 (16.4%)
Primary care	1,585 (81.4%)	1,576 (81.2%)	1,606 (81.4%)	1,595 (81.3%)

Figure 1. Top 20 most frequently prescribed antimicrobials in 2021. (A) Tertiary care hospitals, (B) secondary care hospitals, (C) primary care hospitals.
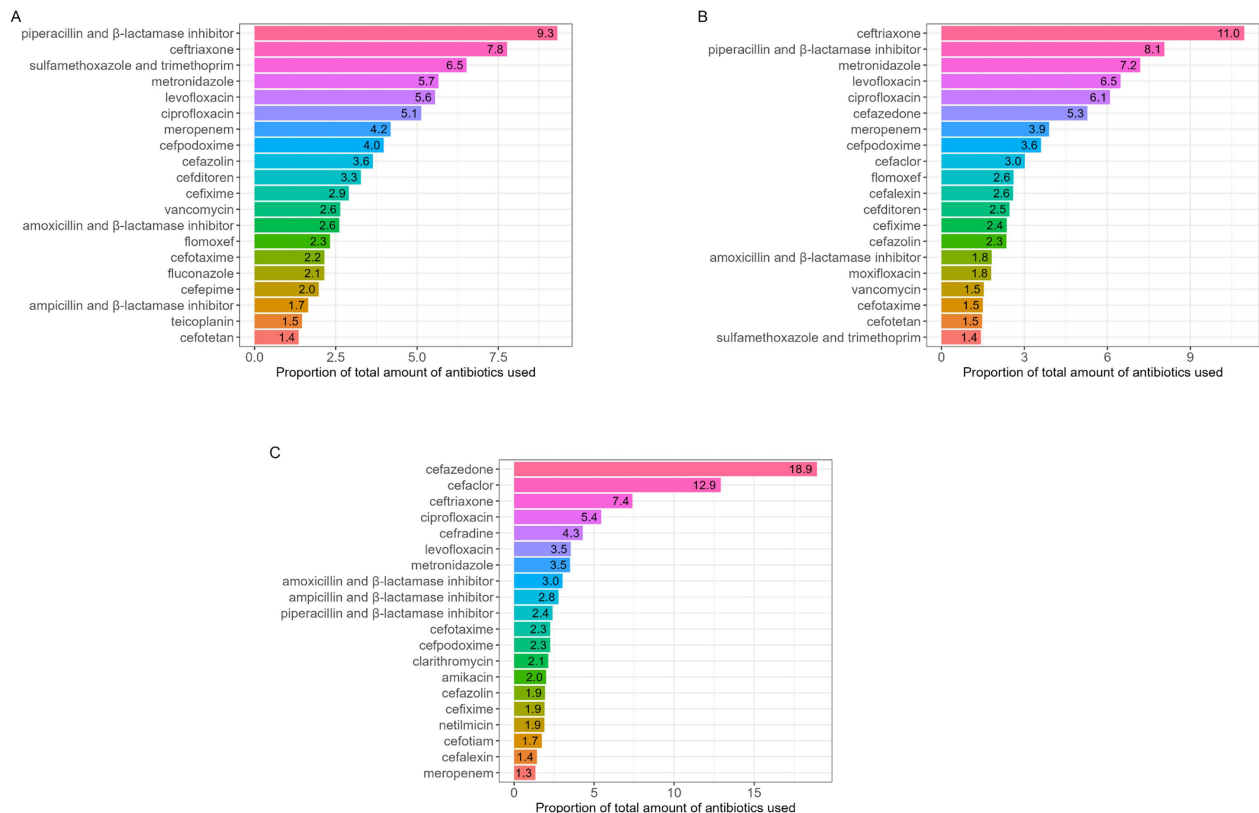
Figure 2. Antimicrobials consumption according to KONAS classification between 2018 and 2021. (A) Tertiary care hospitals, (B) secondary care hospitals, (C) primary care hospitals. DOT, Days of therapy.
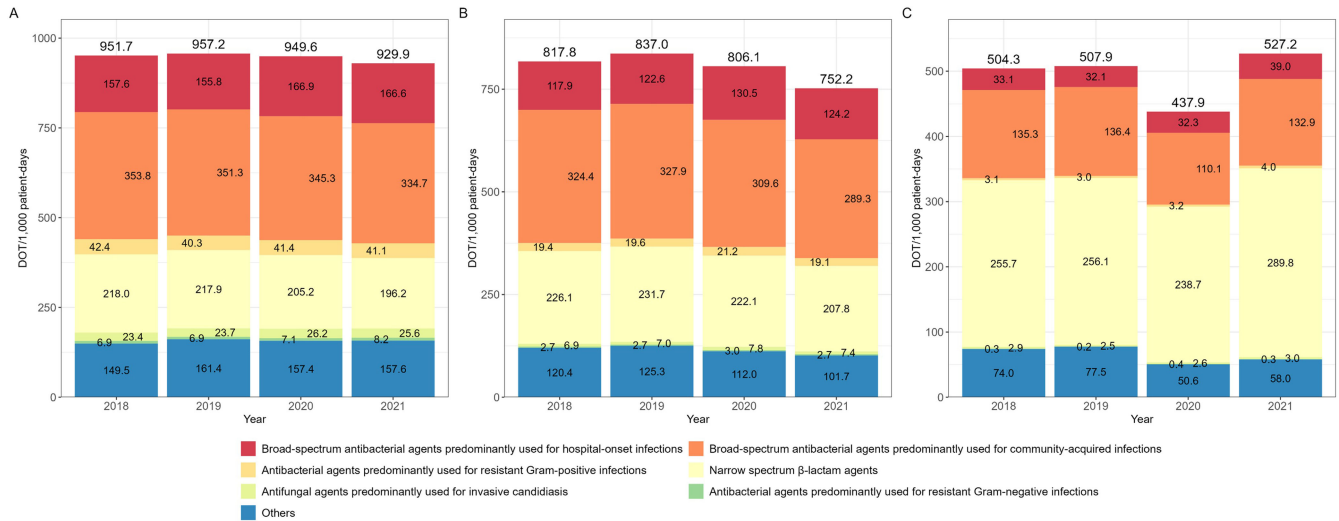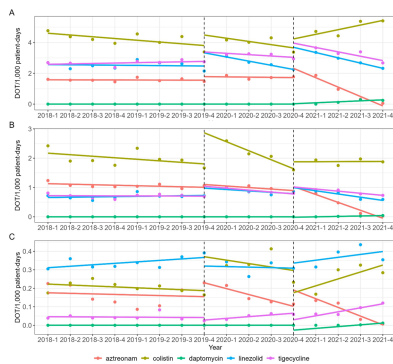

Figure 3. Reserve antimicrobials consumption between 2018 and 2021. (A) Tertiary care hospitals, (B) secondary care hospitals, (C) primary care hospitals. DOT, Days of therapy.

decreased from 951.7 to 929.9 days of therapy (DOT)/1,000 patient-days in TCHs and from 817.8 to 752.2 DOT/1,000 patient-days in SCHs during study period, but not in PCHs (from 504.3 to 527.2 DOT/1,000 patient-days). Moreover, in 2021, while use of reserve antimicrobials has decreased from 13.6 to 10.7 DOT/1,000 patient-days in TCHs and from 4.6 to 3.3 DOT/1,000 patient-days in SCHs, it has increased from 0.7 to 0.8 DOT/1,000 patient-days in PCHs. **Conclusion:** This study confirms that antimicrobial use differs by hospital type in Korea. Recent increases of use of antimicrobials, including reserve antimicrobials, in PCHs reflect the challenges that must be addressed.

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Antibiotic Stewardship
Guideline-unjustified inpatient therapy for non-ICU patients with community-acquired pneumonia (CAP) at 105 Veterans Affairs

Matthew Goetz, UCLA, VA Greater Los Angeles Healthcare System; Christopher Graber, VA Greater Los Angeles Healthcare System; Melinda Neuhauser, CDC DHQP and Makoto Jones, CDC DHQP

Background: CAP is often inappropriately treated with agents active against multidrug-resistant organisms (MDRO; methicillin-resistant S. aureus [MRSA] and P. aeruginosa [PSA]) and for prolonged duration. We assessed the relationship between antibiotic use with ATS/IDSA guideline-unjustified empiric and definitive MDRO therapy and prolonged duration in non-ICU inpatients with CAP at 105 VA Medical Centers. **Methods:** From VA Corporate Data Warehouse data, we identified patients with discharge ICD-10-CM codes consistent with CAP from 1/2022-3/2023, excluding cases with 14 days of antibiotic therapy, ICU admission, concurrent infections, or severe immunocompromise. We considered as jultified empiric (≤third day of hospitalization) therapy: anti-MRSA therapy for patients with prior positive MRSA cultures, anti-PSA therapy for patients with prior positive PSA cultures, and both anti-MRSA & anti-PSA therapy in patients with severe pneumonia and intravenous antibiotics in the prior 3 months. Definitive (>third day of hospitalization) anti-MDRO therapy was considered unjustified in patients who had achieved clinical stability and whose cultures did not grow MRSA or PSA. Prolonged duration (>6 days of therapy) was unjustified if patients were clinically stable or discharged by day 5. **Results:** The median age of the 29,260 patients was 75 (IQR 69,81); 4.6% were women. While 33% and 22% of patients received empiric or definitive MDRO therapy, such therapy was jultified in 12% and 0.5%, respectively. Median facility use of empiric and definitive MDRO therapy was 31% (IQR 25%,38%) and 20% (15%,23%), respectively (Figure 1); this use was unjustified in 89%

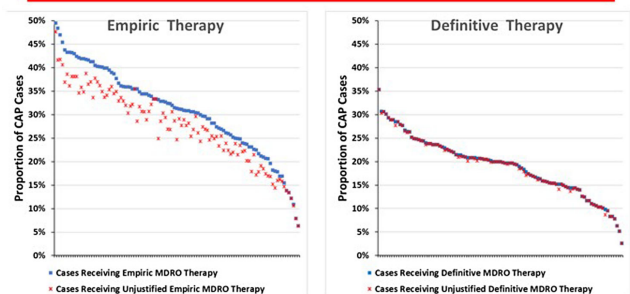## Prescribed versus Unjustified MDRO Therapy

Figure 1: In this and all subsequent figures, each tick on the x-axis represents a separate facility