continuous, volume-based surveillance program that monitors antimicrobial usage trends; and the Hospital National Antimicrobial Prescribing Survey (Hospital NAPS) a standardised auditing program that assesses antimicrobial prescribing appropriateness. This study aims to analyse the 2023 NAUSP and Hospital NAPS data to compare the volume and appropriateness of inpatient antimicrobial use in Australian hospitals. **Methods:** Data were extracted from hospitals that participated in both programs in 2023, including systemically administered antimicrobials for adult patients. NAUSP data were aggregated and acute inpatient usage rates relative to patient activity were calculated as Defined Daily Doses (DDD) per 1,000 Occupied Bed Days (OBD) for individual antimicrobials. Hospital NAPS data on appropriateness of prescribing, as assessed by local auditors as a point prevalence survey and using a standardised assessment matrix, were aggregated and calculated for each antimicrobial. Antimicrobials with high-volume use (NAUSP data), high rates of antimicrobial prescribing (NAPS data), or classified as medium to high risk for antimicrobial resistance potential according to the World Health Organization AWaRe classifications were further investigated. **Results:** There were 192 acute care hospitals that contributed in 2023 to both NAUSP (representing 12, 619, 253 OBDs) and Hospital NAPS (representing 21,017 antimicrobial prescriptions). Figure 1 summarizes the aggregate usage rates and appropriateness for antimicrobials of interest. Antimicrobials with the highest usage rates, including amoxicillin-clavulanic acid and cefazolin (92.2 and 78.8 DDD/1,000 OBD respectively), had moderate levels of appropriateness (67.8% and 69.9% respectively). Similar 'Access' antimicrobials such as doxycycline, amoxicillin and metronidazole, which tend to be unrestricted in hospital formularies, had moderate levels of appropriateness. Cefalexin had the lowest rate of appropriateness (52.2%). In comparison, 'Watch' antimicrobials, including meropenem and vancomycin, which tend to be restricted, had lower usage rates (14.3 and 19.8 DDDs/1,000 OBD respectively) but higher rates of appropriateness (83.5%, 82.8% respectively). **Conclusion:** This analysis highlights the importance of assessing and analyzing antimicrobial quantity and quality concurrently, providing a holistic view of prescribing practices. Furthermore, AMS efforts should include all antimicrobials, regardless of restriction category, as commonly used, unrestricted antimicrobials may have substantial rates of inappropriate prescribing.

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Presentation Type:
Oral Presentation
Subject Category: Diagnostic Stewardship

Are SEP-1 and Blood Culture Stewardship at Odds? Retrospective Review of SEP-1 Failures Pre- and During Blood Culture Shortage

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Background: In summer 2024, our institution implemented enhanced blood culture (BCx) stewardship due to a global BCx shortage. Centers for Medicare and Medicaid Services' (CMS) SEP-1 quality measure requires BCx. We evaluated whether the BCx shortage and stewardship impacted SEP-1 compliance. **Methods:** A retrospective review of SEP-1 data from an academic and a community hospital (1/1/2022-9/30/24) was performed and grouped by quarter. SEP-1 compliance was abstracted per CMS criteria. Failures due to BCx were categorized by timing of antibiotics prior to BCx: short delay (0-3 hours after antibiotics), long delay (>3 to 24 hours or no BCx). SEP-1 failures due to no BCx underwent manual chart review to determine infectious source, alternative culture obtainment, and adjudication if BCx would have changed clinical management. BCx failures were compared descriptively by quarter with emphasis on the BCx shortage (quarter 3 of 2024). **Results:** Over 11 quarters, 690 cases were abstracted for SEP-1 review (mean 62.7 cases/quarter). The mean SEP-1 success rate pre-shortage was 51.1%, while SEP-1 success rate during BCx shortage was 40.3%, the lowest rate since 2022. SEP-1 failures due to improper BCx obtainment were the cause of SEP-1 failure in a mean of 12.3% of cases reviewed pre-shortage, but this increased to 30.6% during the BCx shortage (Figure 1). Pre-shortage BCx failures were due to short delays (77.9%), long delays (15.6%), and no BCx (6.5%). During the shortage, BCx failures were more commonly due to long delays (31.6%) or no BCx obtained (31.6%) (Figure 2). The majority (7/12) of cases with no BCx obtained were during the shortage. Upon adjudication of no BCx cases, positive BCx would have significantly changed management in only 2/12 cases. Reasons BCx would not have changed management included urinary tract infection with positive urine culture (5/12), non-infectious/non-bacteremic diagnoses (3/12), and community-acquired peritonitis with surgery (2/12). Specifically during the shortage, 5 were UTIs (4 had positive cultures), 1 with peritonitis (positive intra-abdominal cultures), and 1 without bacterial infection. **Conclusion:** SEP-1 failures increased during

Figure 1: Antimicrobial volume and appropriateness data for hospitals that participated in both NAUSP and Hospital NAPS in 2023

Antimicrobial	WHO AWaRe category*	Usage rate^ (DDD/1,000 OBD)	Appropriateness^^ %
Amoxicillin-clavulanic acid	Access	92.2	67.8
Cefazolin	Access	78.8	69.9
Flucloxacillin	Access	68.4	84.2
Doxycycline	Access	63.3	73.1
Ceftriaxone	Watch	55.6	69.5
Amoxicillin	Access	48.4	78.5
Piperacillin-tazobactam	Watch	44.4	66.3
Cefalexin	Access	40.8	52.2
Azithromycin	Watch	28.9	72.8
Benzylpenicillin	Access	25.0	83.1
Metronidazole	Access	24.2	68.3
Vancomycin	Watch	19.8	82.8
Meropenem	Watch	14.3	83.5

* World Health Organization (WHO) AWaRe categories: Access – antimicrobials with lower resistance potential and are typically recommended as first or second choice empiric treatment; Watch – antimicrobials with higher resistance potential
^ Consumption usage rates are based on NAUSP data and represent an aggregate calculated from pooled antimicrobial usage data
^^ Appropriateness is based on NAPS data and are aggregated from pooled antimicrobial prescription data

the BCx shortage, possibly driven by efforts to reduce unnecessary BCx use. Use of alternative culture sites with higher yield than blood cultures resulted in SEP-1 failures that did not result in patient harm. SEP-1 should be re-evaluated, as BCx are not the only means of diagnosing the microbiologic etiology of infection and are often low yield in select patients with sepsis.

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Figure 1: SEP-1 Blood Culture Failure Rate

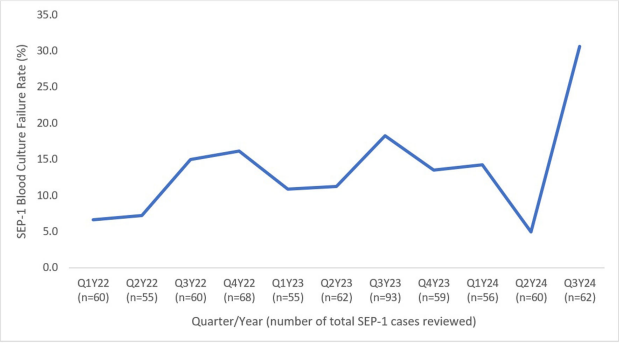
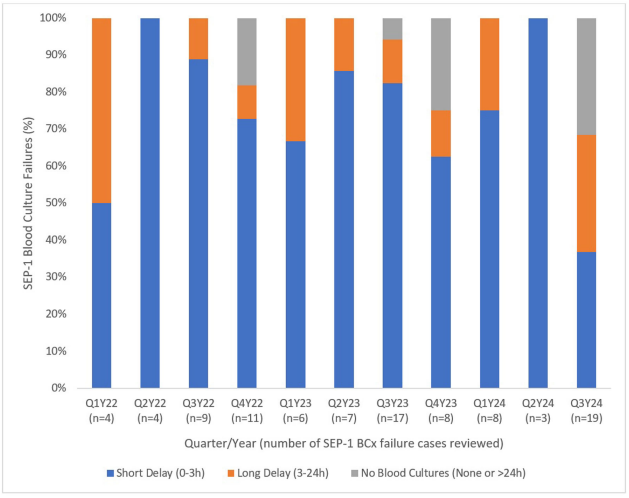


Figure 2: SEP-1 Blood Culture Failure Reasons



Presentation Type:
Oral Presentation
Subject Category: Environmental Cleaning
Efficacy of a Disinfectant in Reducing Pathogen Contamination in Renovated Inpatient In-Room Sinks: A Randomized Controlled Trial
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Introduction: The prevention of colonization of new inpatient room sinks with epidemiologically important pathogen (EIP) is poorly understood. **Methods:** We performed a randomized controlled trial and microbiological analysis to describe the timing and frequency of EIP contamination of in-room handwashing sinks in a renovated general medicine unit and to test the efficacy of a disinfectant on wastewater drains. Unit renovations included new distal plumbing for all unit sinks. Sinks were randomized 1:1 to intervention and control. 15 intervention sinks underwent the application of a foamed disinfectant into each study sink's drain (Virasept [Ecolab]) every Monday, Wednesday, and Friday. 15 control sinks underwent standard disinfection. Microbiological samples were taken every week from 3 locations from each study sink: the top of the bowl, the tail pipe, and the p-trap. The primary outcome was sink conversion events (SCEs), defined as species-specific-EIP contamination of a sink in which that EIP had not previously been detected. EIPs were defined as Enterobacterales, Acinetobacter spp., Pseudomonas aeruginosa, and Stenotrophomonas maltophilia. Sink hygiene compliance was also measured. **Results:** Sink samples were obtained 11 times from July 2024 to October 2024 giving 990 total cultures, 495 in each study arm. The first sampling occurred after renovations were completed and one week before patients returned to the unit. In total, 314 patients were admitted to the study unit during the study period. We observed 15 SCEs (68%) overall; 3 sinks (20%) in the intervention and 12 (80%) in the control arms ($p < 0.01$) (Figure 1). Overall, 135 EIPs were recovered: 27 from intervention and 108 from control sinks ($p < 0.01$). On the first sampling, 6 intervention and 3 control sinks already harbored EIP. Of those, all 6 in the intervention arm were not detected in subsequent samplings whereas all 3 in the control arm were. The [DAM1] [A2] most common organisms recovered were Acinetobacter spp. (70 [52%]), Stenotrophomonas maltophilia (29 [21%]), and Enterobacter spp. (23 [17%]). Of the 300 opportunities to measure sink hygiene compliance, 229 (76%) did not meet compliance, most commonly containing absorbent pads. **Discussion:** In a renovated general medicine unit, the application of the intervention led to significantly lower SCEs (20% vs. 80%) and EIPs (27 vs. 108) recovered from study stinks compared to control. Sink hygiene compliance was suboptimal, with 76% of observed instances involving inappropriate sink use. These findings highlight the importance of effective sink disinfection and sink hygiene protocols in reducing the risk of pathogen transmission.

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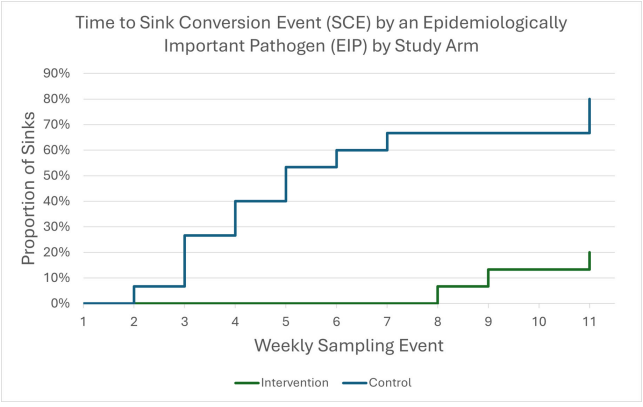

Presentation Type:
Oral Presentation
Subject Category: Implementation Science
Impact evaluation of active surveillance testing for Candida auris on infection prevention behaviors
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Background: Candida auris (C. auris) is an emerging multidrug-resistant fungus associated with high mortality from healthcare-associated