Conclusion. Contrary to what is believed, we observed that most psoas abscesses are pyogenic in origin. Our observations reiterate diligent microbiological investigations in all cases of psoas abscess to avoid empiric anti-tuberculous therapy.

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1364. Microbiology of Sepsis in a Combat-Trauma Military Population
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Background. There are limited data on sepsis in combat casualties. We examined characteristics of sepsis, specific infections, and associated microbiology in a complex combat trauma population.

Methods. The Trauma Infectious Disease Outcomes Study collected infection-related data from military personnel wounded during deployment (2009–2014). Medevac patients transferred to participating US military hospitals with sepsis or septic shock based on the Sepsis-1 SIRS criteria were analyzed for associated potential sources and infection-associated clinical microbiology.

Results. Prevalence of sepsis was 24.7% (667 patients) with 93 (14%) patients meeting septic shock criteria. There were 1013 sepsis/shock episodes (SSE) among 667 subjects. Infections attributed to SSE were identified in 996 (98.3%) of 1013 episodes, primarily being bloodstream infections (BSI) +/- other infections (29.5%), skin and soft tissue (SSTI)/osteomyelitis (35.3%), pneumonia (12.1%), and multiple concurrent infections (14.2%). At least 1 organism was identified in 96% of SSE and 53% were polymicrobial. Gram-positive organisms (GP) were identified in 54% of SSE: 16% with multiple GP, of monomicrobial infections 4.1% were S. aureus, 15.8% other staphylococci, and 13% Enterococcus spp. Gram-negative bacilli (GN) were identified from 74.5% of SSE: 34% with multiple GN, of monomicrobial infections 11% were Pseudomonas spp., 8% E. coli, 6% Enterobacter spp., and 6% Acinetobacter spp. Mycobacterial species were uncommon (0.9%). Yeast, mold, and anaerobes were identified from 19%, 22%, and 12.5% of SSE, respectively. Compared to sepsis, septic shock infections were more often polymicrobial (p<0.001), and had more infections with ESKEAPE pathogens, only Mucor spp., and only Bacteroides (p<0.05). More infections with only Pseudomonas spp. and only non-haemuleniis coagulase-negative Staphylococci were identified among sepsis patients (p<0.05).

Conclusion. Sepsis rates, using the Sepsis-1 criteria are sensitive but lack specificity supporting reclassification using updated Sepsis-3 criteria. In a complex trauma population, sepsis is common with most frequent infections related to SSTI/osteomyelitis, as well as BSI and multiple concurrent infections with a diverse spectrum of microbiology.

Disclosures. Dana M. Blyth, MD, Nothing to disclose

1365. Clinical and Financial Implication of Dalbavancin Utilization on Length of Stay Avoidance in Acute Bacterial Skin and Skin Structure Infection
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Session: P-76. Skin and Soft Tissue

Background. Our institution admits 650 patients annually for acute bacterial skin and skin structure infection (ABSSI). These patients may require intravenous antibiotics, potentially complicated by social factors and loss to follow up. Dalbavancin is a long-acting lipoglycopeptide given as a single dose regimen for ABSSSI. A previous review conducted at our institution identified 117 potential avoidable hospital days over 4 months with outpatient dalbavancin use. The objective of this prospective study was to evaluate the clinical and financial impact of avoided admissions with outpatient dalbavancin use.

Methods. The Institutional Review Board approved this single-site, prospective study. All patients who presented to the emergency department (ED) with ABSSI from December 15, 2020 to April 15, 2021 were included in the study. Dalbavancin eligibility criteria were given to providers. Eligible patients were given a single dose of dalbavancin and then discharged. The primary outcome was the difference between percentage of avoidable admissions from the ED with dalbavancin use in the retrospective cohort and prospective cohort. The secondary outcomes were estimated length of stay avoidance, percentage of treatment success without ED re-visit within 30 days, estimated hospital cost avoidance and drug cost reimbursement. The primary outcome was assessed using the Chi-square test. Descriptive statistics were used for the secondary outcomes.
Results. Fourteen patients received dalbavancin and avoided hospital admissions. The percentages of admissions avoided in the retrospective and prospective cohorts were 16.02% and 6.67%, respectively (Figure 1). A difference of 9.35% was found to be statistically significant (p=0.01). The total estimated length of stay avoidance was 50 days. No patients re-visited the ED within 30 days with treatment failure. The total estimated hospital cost avoidance was $148,852 (Table 1). The net reimbursement for dalbavancin over drug cost was $5,100 (Table 2).

### Table 1. Culture from drained specimen

| Organism                  | N=14 |
|---------------------------|------|
| MRSA                      | 4    |
| No growth                 | 3    |
| Normal skin flora          | 1    |
| MSSA                      | 1    |
| Staphylococcus lugnuenes  | 1    |
| Streptococcus pyogenes     | 1    |
| Arcanobacterium species    | 1    |
| Lactose fermenter          | 1    |

### Summary of the predominant bacterial isolates.

| Bacteria                   | Penicillin | Retropenaryagi | Parapenryagi |
|----------------------------|------------|----------------|--------------|
| Group A streptococcus      | 26.3%      | 37.2%          | 60%          |
| Hemophilus influenzae      | 14.9%      | 7.1%           | 0%           |
| Hemophilus parainfluenza   | 13.2%      | 16.3%          | 30%          |
| MSSA*                      | 11.9%      | 12.9%          | 20%          |
| UTI*                       | 5.1%       | 7.1%           | 10%          |
| Anaerobes                  | 0.1%       | 0.7%           | 65.7%        |

*MRSA = Methicillin resistant staph aureus, *MSSA = Methicillin susceptible staph aureus

Methods. We reviewed records of 125 patients who underwent surgical drainage of DNI’s from 1/2015 – 12/2019. In addition to demographic data we gathered information on bacterial isolates and their susceptibilities. Chart review was performed for patients with *Staphylococcus aureus,* to look for any unique presenting features.

Results. Up on reviewing the data- peritonsillar abscesses were common in older children (Median age 11 years). As expected, retropenaryagi and parapharyngeal infections were common in younger ones (< 5 years). Group A streptococcus remained the most common aerobic isolate followed by *Hemophilus influenzae/parainfluenzae.* MRSA was detected in ~7 % of all cultures (see enclosed table). Notably, none of the MRSA isolates were clindamycin resistant. However, MSSA resistance to clindamycin was about 20%. No clinical characters predicted isolation of S. aureus. Anaerobic infections (polymicrobial) were overwhelmingly common across all abscess types.

Conclusion. Based on our review, Amoxicillin-Sulbactam is a good empiric choice antibiotic for deep neck infections in our institution. Ceftriaxone with clindamycin is another option. Clindamycin monotherapy seems to be inadequate. Staph aureus and especially MRSA, were only isolated in a small percentage of cases. Unless a patient is ill appearing, vancomycin use seems unnecessary. Clinical presentation was not helpful to suspect infection with Staph aureus.

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1367. Management of Patients Presenting with Purulent Skin and Soft Tissue Infections in the Emergency Department (ED)
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Session: P-76. Skin and Soft Tissue

Background. Incision and drainage (I&D) is the primary treatment for purulent skin and soft tissue infection (SSTI). Empiric adjunctive treatment of purulent SSTI targets methicillin-resistant *Staphylococcus aureus* (MRSA). In light of increasing antibiotic resistance, culture and sensitivity (C&S) from drained specimen and consideration of the local antibiotic are recommended. Our primary objective was to assess the utilization of C&S from drained specimen in our institution’s ED. Our secondary objectives were to describe antibiotic choice and duration of therapy upon discharge, to evaluate the appropriateness of antibiotic choice based on C&S and local antibiogram, and to assess the need for adjunctive antibiotic based on available literature.

Methods. A retrospective cohort study was performed on a random sample of unique patients who underwent I&D procedure in the ED from January 2019 through December 2019. Demographic and clinical data were collected from the electronic medical record.

Results. Of 120 patients evaluated, only 14 patients (11.7%) had C&S performed on the initial I&D specimen (Table 1). Five patients received inappropriate antibiotic(s) based on C&S. Of 108 patients who were discharged from ED, antibiotic(s) was prescribed in 97 patients (Table 2). Mean duration of therapy was 7.8 days with 27.8% of patients prescribed for the same infection. Fifteen patients were readmitted to ED within 30 days and five of them required hospital admission due to recurrent infection. No clinical character predicted discharge from ED. We found that the most common antibiotic(s) prescribed in 97 patients (Table 2).

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1366. Deep Neck Infections: Bacteriology and Antimicrobial Susceptibilities, Akron Children’s Experience
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Session: P-76. Skin and Soft Tissue

Background. Deep neck infections (DNIs) are uncommon (~45,000 US cases annually) but, potentially serious. Published data regarding bacteriology and antibiotic usage for DNI’s in children is limited. In addition, geographic variation in the choice of empiric antibiotics (ampicillin-sulbactam vs piperacillin-tazobactam vs Ceftriaxone and Clindamycin/vancomycin/linezolid). Admission unit (floors vs intensive care) and service (hospitalist vs infectious diseases) were some important determinants that influenced choice of empiric antibiotics. This retrospective study aimed to review local data and come up with standard guidance for empiric therapy.