

## Introduction

- Community-acquired methicillin-resistant *Staphylococcus aureus* (MRSA) is a virulent organism that has been an increasingly prevalent cause of acute hand infections, even in healthy individuals<sup>1-3</sup>
- To ensure adequate coverage of ca-MRSA, antibiograms depicting the local resistance patterns should guide the treatment of the hand infection. The IDSA has proposed empiric coverage of MRSA if the local rate of MRSA skin and soft tissue infection is greater than 10% to 15%<sup>7</sup>.
- The ultimate goal of our study was to investigate and understand the prevalence, treatment, and characteristics of common skin and soft-tissue infections (SSTI) of the hand to improve evidence based treatment.
- We hypothesized that community acquired hand infections including MRSA are developing resistance to commonly used antibiotics such as clindamycin

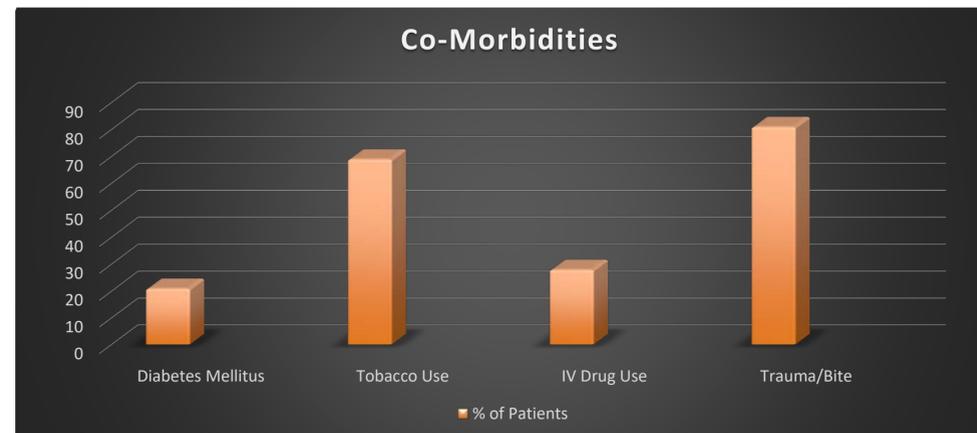
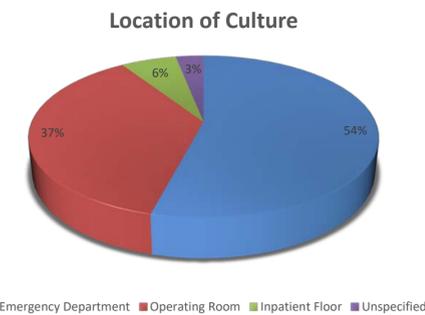
## Methodology

- A retrospective electronic medical record review was performed for all patients admitted to Truman Medical Center Hospital Hill from 2015-2017 with hand infections based on ICD 9 and 10 codes (in references) for infections localized to the fingers, wrist, or hand including felon, paronychia, or infectious tenosynovitis.
- Patients were identified and reviewed for demographic data including age, sex, comorbidities and follow-up.
- Positive cultures obtained in the emergency room, inpatient unit or operating room were reviewed for organism and sensitivities.
- Descriptive statistics were used to evaluate the data.



## Results

Demographics	
Total # of Patients	85
Average Age	43.4
Median Age	44
Minimum Age	19
Maximum Age	84
Male #	61
Female #	24
Male %	71.8
Female %	28.2



## Methicillin-Resistant Staphylococcus Aureus (MRSA) (N = 44)

Antibiotics	Number of Isolates	Percent of Sensitivity
Clindamycin	44	83.7
Trimethoprim/Sulfa	44	90.9
Vancomycin	44	100
Tetracycline	22	90.9

## Strengths/Limitations

- Infections included by ICD codes such as cellulitis and tenosynovitis may lead to false negative culture results
- Medical provider culture techniques could not be assessed and may lead to inaccurate results
- Resistance patterns of this study closely mirror the most recent hospital antibiogram
- Differentiation between hospital acquired and community acquired infections was not delineated

## Conclusion

- MRSA infections account for approximately 52% of inpatient hand infections
- MRSA Clindamycin resistance is approximately 16% which is above IDSA recommendations for empiric therapy. Trimethoprim/sulfamethoxazole resistance remains comparatively low
- Trauma/Bites, Diabetes Mellitus, Smoking and IV drug abuse are common co-morbidities in patients admitted for hand infections.
- Careful attention to hand infection antibiotic resistance patterns is recommended.

## References

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