

Background

Community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA) skin and soft tissue infections continue to afflict patients in both inpatient and outpatient settings. Despite the high prevalence of CA-MRSA skin and soft tissue infections in the community, few studies have examined the management of these infections in community-based health care environments like family practice and internal medicine clinics.

Methods (Revised)

Community-Acquired MRSA in Medical Clinics: A STARNet Study
(Card to be completed by clinic employees who have IRB training on file with Chris Frei)

Gender	Race	Ethnicity	History
<input type="radio"/> Male	<input type="radio"/> Black	<input type="radio"/> Hispanic	<input type="radio"/> Diabetes
<input type="radio"/> Female	<input type="radio"/> White	<input type="radio"/> Non-Hispanic	<input type="radio"/> Provides healthcare to others
	<input type="radio"/> Other		<input type="radio"/> Skin infection (ever)?
			<input type="radio"/> Last 90 days?
			<input type="radio"/> MRSA?
			<input type="radio"/> Antibiotic
			Dose & freq _____

Vitals
 Height (inches) _____
 Weight (pounds) _____
 Pain (1 to 10=worst) _____

Insurance
 Private insurance
 Medicare/medicaid
 None/self-pay

Current Infection
 Location _____
 Duration (days) _____
 Size (cm x cm) _____
 Deepest tunnel depth (cm) _____
 (Take picture before & after I&D)
 (Get culture; call Chris 210-288-2518)

Wound
 Erythema
 Small
 Ulceration
 Drainage
 Abscess
 Satellites

Treatment Plan
 Incision & drainage (this visit)
 Antibiotic
 Dose & freq _____
 Duration _____
 Re-assess need for I&D at t/u
 Follow-up (days) _____

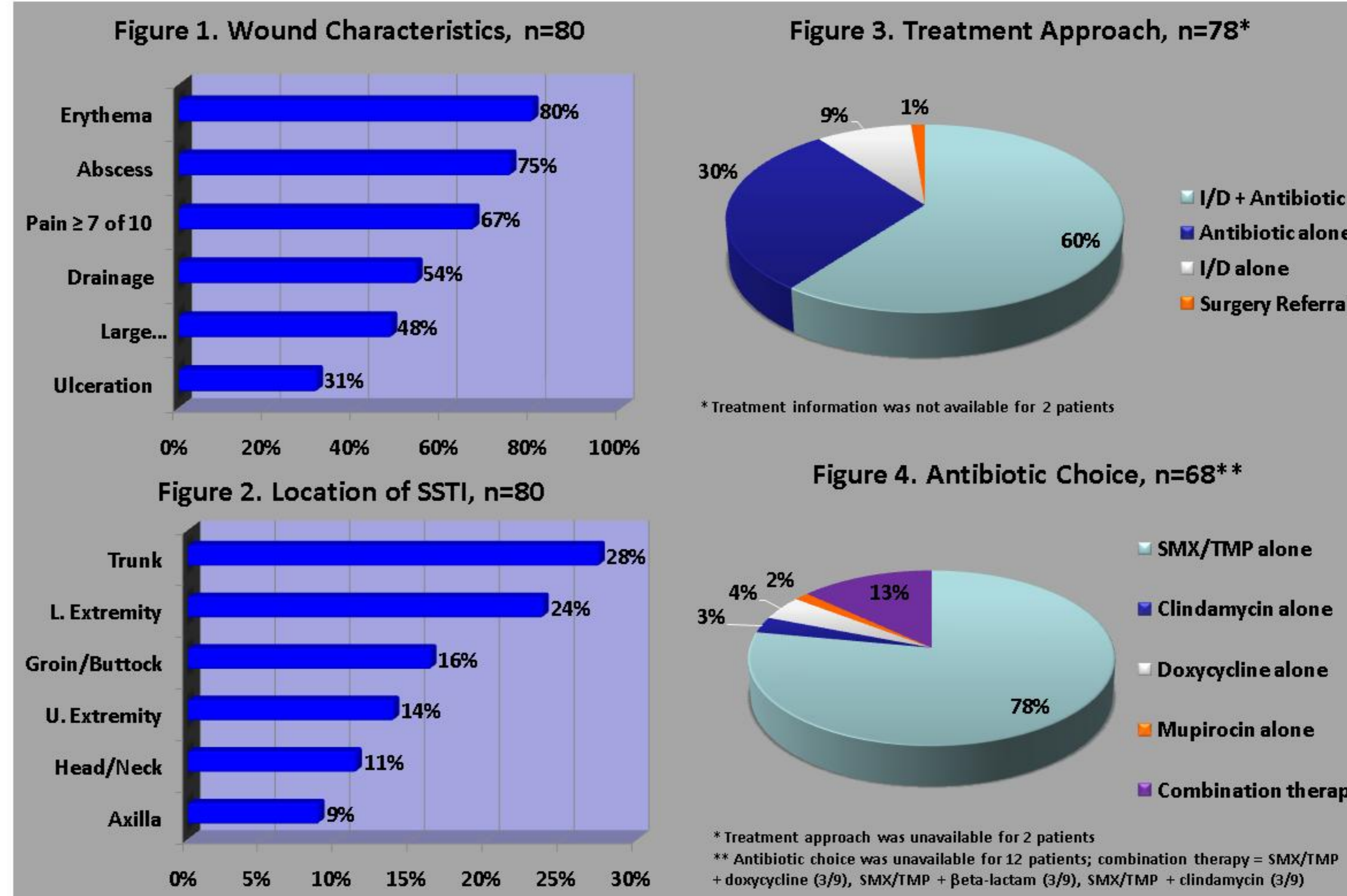
Methods

Family practice clinics in Central and South Texas participated in this prospective, community-based, translational research study. Patients suspected of CA-MRSA skin and soft tissue infections were eligible for study inclusion; however, only those with MRSA-positive cultures and clinical information cards were included in this analysis. Clinical practitioners collected demographic and clinical information, a picture of the infection, and a wound swab for each patient; data were processed centrally in Dr. Frei's research laboratory. Swabs were plated onto Tryptic Soy Agar (TSA); MRSAselect™ agar was used for identification and isolation of MRSA. MRSA isolates underwent antibiotic susceptibility testing to sulfamethoxazole/trimethoprim (SMX/TMP), doxycycline, clindamycin, linezolid, and vancomycin, via Etest® on Mueller-Hinton Agar (MHA). The following strains were used as quality controls (QC) for each batch of isolates: ATCC 43300, positive MRSA Select™ QC, ATCC 25923, negative MRSA Select™ QC, and ATCC 29213, Etest® QC. Descriptive statistics were used to summarize demographic and clinical data. MIC₅₀, MIC₉₀, and percent susceptible (%) were calculated for all MRSA isolates.

Characteristic	Overall
Gender, %	
Male	39 (49%)
Female	41 (51%)
Race†, %	
Black	3 (5%)
White	43 (67%)
Other	18 (28%)
Ethnicity‡, %	
Hispanic	65 (82%)
Non-Hispanic	14 (18%)
BMI* (kg/m²), median (IQR)	31 (26-40)
Risk factors, %	
Diabetes	24 (30%)
Provides healthcare to others	4 (5%)
Prior SSTI	34 (15%)
Within last 90 days	13 (16%)
MRSA	5 (6%)
Received antibiotic(s) for SSTI	16 (20%)

† Data for race were missing for 16 patients
 ‡ Data for ethnicity were missing for 1 patient
 * Data for BMI were missing for 42 patients
 **IQR, interquartile range

Results



Antibiotic	MIC ₅₀ (µg/mL)	MIC ₉₀ (µg/mL)	% of Isolates Susceptible*
SMX/TMP	0.047	0.094	100
Doxycycline	0.047	0.064	100
Clindamycin	0.064	0.125	94
Linezolid	1.0	1.5	100
Vancomycin	1.5	2.0	100

*% susceptible was calculated based on the Clinical and Laboratory Standards Institute (CLSI) breakpoints

Conclusion

Many patients with suspected CA-MRSA SSTI were MRSA-positive; most received I/D plus anti-MRSA antibiotics. SMX/TMP-containing antibiotic regimens were most commonly prescribed. Community isolates displayed >90% susceptibility to tested agents.

Acknowledgements

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