



Emergency Department Intervention to Improve Antibiotic Selection for Skin and Soft Tissue Infections in Adult and Pediatric Outpatients

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Background

- Skin and soft tissue infections (SSTI) account for 2.4 million annual U.S. emergency department (ED) visits
- Previous research shows that patients commonly receive empiric antibiotics not adherent with guidelines, leading to potential patient harm and accelerating emergence of antibiotic resistance
- ED is a deserving focus of antimicrobial stewardship, yet interventions have not been well studied in this setting

Objectives

- Assess the effectiveness of a multifaceted stewardship intervention to reduce inappropriate antibiotic use and duration for discharged ED patients with SSTI
- Evaluate provider experience with the antibiotic stewardship intervention

Results

- 583 SSTIs included
- Intervention site=283, control site=300

Pre-Intervention

- Prior to intervention, adherence was:
- 41% at intervention site (N=130)
- 19% at control site (N=150)

Intervention

- During the intervention, adherence at the at intervention site was 51% (N=99)
- Adherence compared to pre-intervention period was higher, adjusted odds ratio (aOR) 2.26 (1.24-4.10)
- During the “intervention” period, adherence at control site was 25% (N=150)
- Adherence compared to “pre-intervention” period was unchanged, aOR: 1.00 (0.53-1.89)

Post-Intervention

- Post-intervention vs. pre-intervention adherence at the intervention site was similar:
- aOR: 0.94 (0.45-1.97)

Conclusions

- Implementation of a multi-faceted intervention for SSTI stewardship significantly improved adherence to SSTI guidelines
- Adherence regressed after the intervention ended
- Adherence was suboptimal in all time periods and both sites.
- Further research needed to understand barriers and challenges to implementation of SSTI guidelines in ED settings

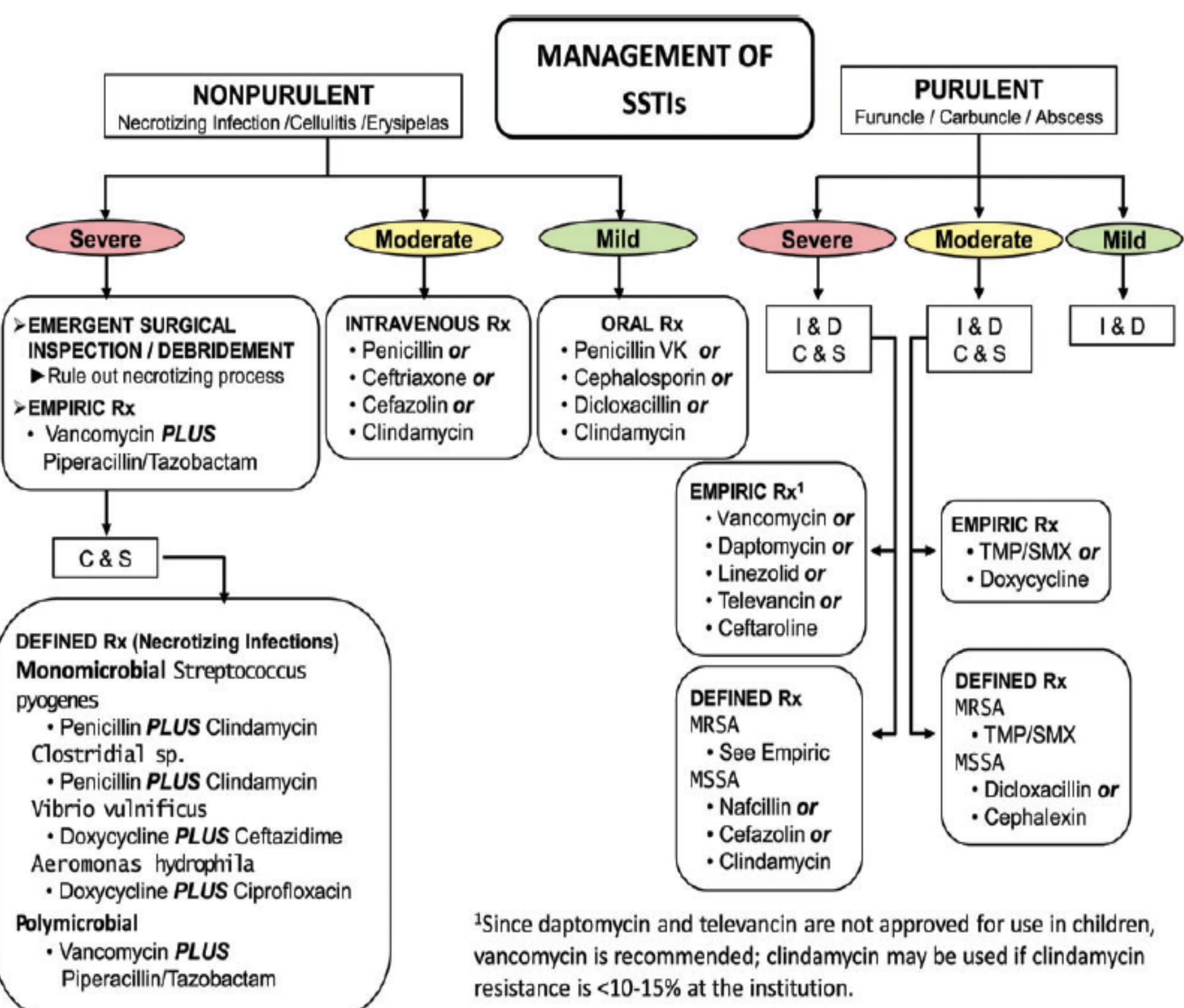
Methods

- Two sites participated in the investigation
 - Intervention site (UC Davis ED)
 - Control site (Harbor-UCLA ED)
- Non-randomized study of a multifaceted intervention for SSTI
 - Educational presentations
 - Implementation of an electronic order set
 - Dissemination of ED specific antibiograms
 - Monthly departmental peer comparisons
 - Bimonthly individual feedback.
- 3 time periods: see Study Design
 - Pre-intervention (Oct 15-Mar 16)
 - Intervention (Oct 16-Mar 17)
 - Post-intervention (Apr 17-July 17)

Acknowledgements

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2014 IDSA Guidelines for SSTI



Study Design

	Baseline Period (Oct 2015- March 2016)	Intervention Period (Oct 2016- March 2017)	Post-Intervention Period (April 2017- July 2017)
Intervention Site	SSTIs N= 130	SSTIs N = 99	SSTIs N = 54
Control Site	SSTIs N = 150	SSTIs N = 150	

Electronic Order Set

ED Adult Management of ABSSSI
(Acute Bacterial Skin and Skin Structure Infections)
REFERENCE USE OF ORDER SETS IN EMR

