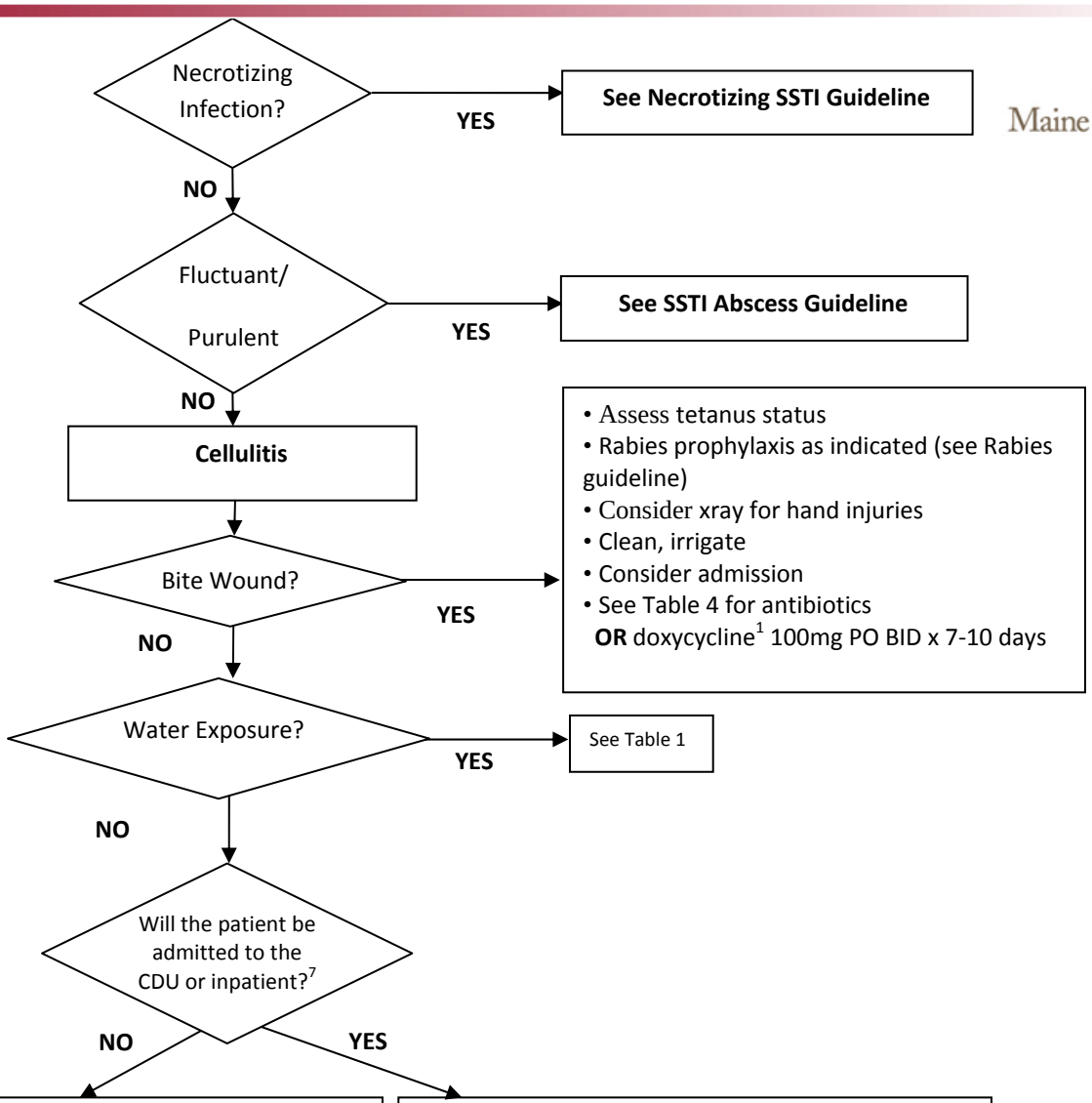
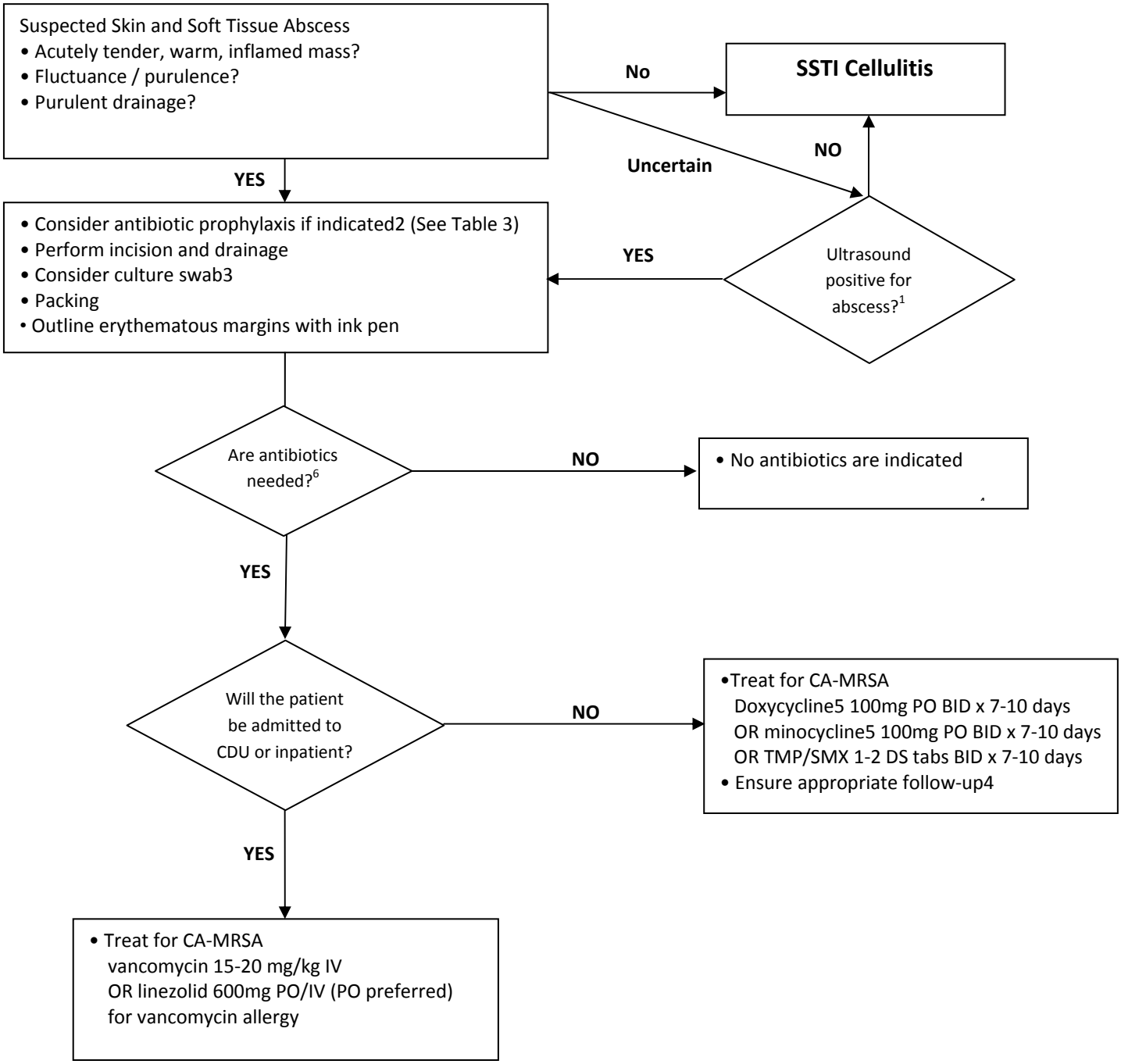
Skin and Soft-Tissue Infections (SSTIs) Clinical Guideline - Cellulitis



1. Tetracyclines should not be used in children <8 years of age
2. It is normal and expected for erythema to advance and spread with routine Strep infection often until day 2 of antibiotic treatment. This DOES NOT constitute treatment failure.
3. Abscess formation often occurs on day 2 of symptoms
4. Treatment with 2 antibiotics enhances risk for C. diff colitis, adverse affects, and resistance
5. MRSA risk factors: contact sports, military service, prison exposure, homosexual men, recent antibiotic use, h/o prior MRSA, young children in day care, household contact with MRSA
6. For recurrent MRSA SSTIs consider "decolonization strategies" in addition to general hygiene
   a. Nasal decolonization with mupirocin twice daily for 5–10 days
   b. Nasal decolonization plus topical body decolonization regimens with a skin antiseptic solution (eg, chlorhexidine) for 5–14 days or dilute bleach baths. (For dilute bleach baths, 1 teaspoon per gallon of water [or ¼ cup per ¼ tub or 13 gallons of water] given for 15 min twice weekly for 3 months.
7. Consider based on systemic signs and symptoms, significant co-morbidities, critical anatomical location (face, hands, genitalia). Refer to Clinical Decision Unit Protocol for cellulitis at EMguidelines.org for inclusion /exclusion criteria.

Created by Thomas Quimby MD, Jeff Holmes MD, and James Little MD

Skin and Soft Tissue Infection Clinical Guideline - Abscess



1. Ultrasound = PPV 93% and NPV 97%. Ultrasound will often identify a purulent fluid collection not suspected on physical exam.
2. Consider antibiotic prophylaxis prior to I&D (see Table 3): Vancomycin 15-20mg/kg IV
3. Cultures recommended in patients treated with antibiotic therapy, patients with severe local infection or signs of systemic illness, patients who have not responded adequately to initial treatment, or if there is concern for a cluster or outbreak
4. Follow-up in 48hrs for reassessment and possible repacking
5. Tetracyclines should not be used in children <8 years of age
6. Consider antibiotics if systemic signs and symptoms, significant comorbidities, critical anatomic location (face, genitalia, hands), surrounding cellulitis, large size or multiple abscesses

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Table 1. Cellulitis with Water Exposure Treatment

Cephalexin 500mg PO QID x7-10 days (**OR** cefazolin 1gm IV Q8hrs) **OR** clindamycin 300mg PO TID x7-10days (**OR** 600mg IV Q8hrs) for PCN allergy

• **PLUS (any of the following if indicated)**:

1. Levofloxacin 750 mg PO/IV Qday x7-10 days (**IF** freshwater exposure)
2. Metronidazole 500 mg IV/PO QID (**IF** exposure to sewage-contaminated water or if soil-contaminated wound; not necessary if antibiotic regimen already includes clindamycin)
3. Doxycycline 100mg PO/IV BID x7-10days or ciprofloxacin 750 mg po BID x 7-10days (**IF** there was salt water exposure)

Table 2 Strep Pyogenes treatment

Outpatient Therapy	**CDU/Inpatient Therapy**
• Cephalexin 500mg PO QID x7-10 days • Clindamycin 300mg PO TID x7-10 days **OR** • Azithromycin 500mg PO Q day x 1 day then 250mg PO Q day x 4 days for PCN allergy	• Cefazolin 1gm IV Q8hrs **OR** • Azithromycin 500mg IV for PCN allergy • Clindamycin 600mg IV for PCN allergy

Table 3. Indications for antimicrobial prophylaxis for bacterial endocarditis

- Prosthetic heart valves, including bioprosthetic and homograft valves.
- Prosthetic material used for cardiac valve repair
- A prior history of IE.
- Unrepaired cyanotic congenital heart disease, including palliative shunts and conduits.
- Completely repaired congenital heart defects with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first six months after the procedure.
- Repaired congenital heart disease with residual defects at the site or adjacent to the site of the prosthetic device.
- Cardiac "valvulopathy" in a transplanted heart. Valvulopathy is defined as documentation of substantial leaflet pathology and regurgitation.

Reference: Wilson W, Taubert KA, Gewitz M. et al. Prevention of infective endocarditis: guidelines from the American Heart Association: a guideline from the American Heart Association Rheumatic Fever, Endocarditis, and Kawasaki Disease Committee, Council on Cardiovascular Surgery and Anesthesia, and the Quality of Care and Outcomes Research Interdisciplinary Working Group. Circulation 2007; 116: 1736.

Table 4. Bite Wounds

Condition	Organisms	Antibiotics	Alternative Antibiotics	Comments
Dog bite	- *P. Canis* - *S. aureus* - *Anerobes*	Inpatient: Ampicillin/Sulbactam 3 gm IV q8h **OR** Outpatient: Amoxicillin/Clavulanate 875/125 mg po bid or 500/125 mg po tid x 7-10 d	Clindamycin 450 mg (5 mg/kg) PO TID X 7-10d + Ciprofloxacin 600 mg po BID x 7-10d	Antibiotics are no substitute for adequate cleansing, irrigation and debridement
Cat bite	- *P. Multocida* - *S. Aureus*	Inpatient: Ampicillin/Sulbactam 3 gm IV q8h **OR** Outpatient: Amoxicillin/Clavulanate 875/125 mg po bid or 500/125 mg po tid x 7-10 d	Cefuroxime 500 mg po bid X 7-10 days **OR** Doxycyline 100 mg po bid X 7-10 days	*P. multocida* is resistant to Cephalexin and Clindamycin
Human bite	- *Strep viridians* - *S. Epidermidis* - *S. Aureus* - *Corynebacterium sp.* - *Eikenella corrodens* - *Bacteroides sp.*	Inpatient: Ampicillin/Sulbactam 3 gm IV q8h **OR** Outpatient: Amoxicillin/Clavulanate 875/125 mg po bid or 500/125 mg po tid x 7-10 d	Clindamycin 450 mg (5 mg/kg) PO TID X 7-10d + Ciprofloxacin 600 mg po BID x 7-10d	Xray and consultation for penetrating "fight bite"

Adapted from "Sanford Guide to Antimicrobial Therapy"

Table 5. Necrotizing Infections

Condition	Organism	Antibiotics	Alternative Antibiotics	Adjunctive
Streptococcal myositis (Streptococcal Toxic Shock)	- Group A Streptococcus	Clindamycin 900 mg IV q8h + Penicillin G 4 mu IV q4h	Clindamycin 900 mg IV q8h + Ceftriaxone 2gm IV q24h	*IV immunoglobulin (IVIG) 1gm/Kg first dose Avoid NSAIDS
Gas Gangrene (Clostridial Myonecrosis)	- Clostridia spp	Clindamycin 900 mg IV q8h + Penicillin G 4 mu IV q4h	Clindamycin 900 mg IV q8h + Zosyn 3.375 gm IV q6h	
Necrotizing fasciitis	-Polymicrobial Group A strep - Gram negative organisms - Anaerobes -MRSA	Zosyn 3.375 gm IV q6h	Clindamycin 900 mg IV q8h + Levofloxacin 750 mg IV q24h	Add Vancomycin if MRSA suspected
Mixed deep tissue infection OR Cause unknown	-Group A Streptococcus -S. aureus -Gram negative organisms -Anaerobes	Zosyn 3.375 gm IV q6h	Clindamycin 600 mg IV q8h + Levofloxacin 750 mg IV q24h	Add Vancomycin if MRSA suspected

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**Kaul, R, McGeer, A, Low, DE, et al. Population-based surveillance for group A streptococcal necrotizing fasciitis: Clinical features, prognostic indicators, and microbiological analysis of seventy-seven cases. Ontario Group A Streptococcal Study. Am J Med 1997; 103:18*