CLINICAL PATHWAY:
Skin and Soft Tissue Infections (SSTI)

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.

Inclusion Criteria: ≥2 month old with skin/soft tissue infection (SSTI)
Exclusion Criteria: <2 month of age, animal bite (refer to Animal Bite Pathway), immunocompromised, orbital/preseptal cellulitis (refer to Preseptal & Orbital Cellulitis Pathway), surgical site infection, trauma with debris, infection associated with injection drug use, dental/intraoral infections

Note:
Outline area of infection with a skin marker to help monitor clinical progress

MILD INFECTION
Afebrile or mild fever; small area of infection, and/or infection **not** on hands, face, perineum, or near implanted device

Total duration of antibiotic treatment: 5 days

Non-purulent infection:
- **Cephalexin PO** 75 mg/kg/day div 3 doses (max 500 mg/dose) x5 days total
- *If recent history of MRSA (within past 6 months), **or** anaphylaxis to amoxicillin, ampicillin or cefazolin, **or** allergy to cephalexin or cefadroxil:*
  - Clindamycin PO 30 mg/kg/day div 3 times a day (max 600 mg/dose) x5 days total

Purulent infection with erythema:
- Consider Peds Surgical consult and/or obtain ultrasound
- Ideal (provides susceptibility data): perform I&D and obtain Gram stain and wound culture
- Consider sending wound "skin and soft tissue MSSA/MRSA PCR swab". Needs a separate swab from the wound culture.
  - If unable to obtain a wound PCR and/or Gram stain and wound culture, **and** if SSTI is on head or neck, consider sending MSSA/MRSA PCR from nares to determine if MRSA coverage is needed.
- Consider **cephalexin PO** 75 mg/kg/day div 3 doses (max 500 mg/dose) x5 days
- *If recent history of MRSA (within past 6 months), MRSA positive on PCR (or as guided by susceptibilities), **or** anaphylaxis to amoxicillin, ampicillin or cefazolin, **or** allergy to cephalexin or cefadroxil:*
  - Clindamycin PO 30 mg/kg/day div 3 times a day (max 600 mg/dose) x5 days total

If water-related injury:
- Consult Infectious Diseases (ID)

- Discharge on oral antibiotics.
- Total duration of antibiotics: 5 days.
- If cultures/PCR obtained, tailor antibiotics based on results and sensitivities.

MODERATE INFECTION
Persistent fever; multiple sites of infection; progressing infection; treatment failure (progresses on antibiotics >24-36 hrs); inability to take enteral antibiotics; infection on hands, face, perineum, near an implanted device; surgical drainage required; and/or patient looks ill

- Obtain CBC, CRP, blood culture

Total duration of antibiotic treatment: 7 days

Non-purulent infection
- **Cefazolin IV** 150 mg/kg/day div q8hr (max 2000 mg/dose) x7 days total
- *If recent history of MRSA (within past 6 months), **or** anaphylaxis to amoxicillin, ampicillin or cefazolin, **or** allergy to cephalexin or cefadroxil:*
  - Clindamycin IV 30 mg/kg/day div q8hr (max 600 mg/dose)
- If infection is progressing on antibiotics >24-36 hours or patient is ill-appearing, consider *adding* Clindamycin IV to cefazolin IV
  - Consult Infectious Diseases

Purulent infection with erythema:
- Consider Pediatric Surgical consult and/or ultrasound
- Ideal (provides susceptibility data): perform I&D and obtain Gram stain and wound culture
- Send wound "skin and soft tissue MSSA/MRSA PCR swab". Needs a separate swab from the wound culture.
  - If unable to obtain a wound PCR and/or Gram stain and wound culture, **and** if SSTI is on head or neck, consider sending MSSA/MRSA PCR from nares to determine if MRSA coverage is needed.
- **Cefazolin IV** 150 mg/kg/day div q8hr (max 2000 mg/dose) x7 days
- *If MRSA positive on PCR (or as guided by susceptibilities), **or** infection is progressing on cefazolin IV >24-36 hrs **or** anaphylaxis to amoxicillin, ampicillin or cefazolin, **or** allergy to cephalexin or cefadroxil:*
  - Change cefazolin IV to clindamycin IV
- If MSSA and infection progressing: obtain ID consult

If water-related infection or injury:
- Consult Infectious Diseases (ID)

SEVERE INFECTION
Persistent fever; rapidly progressing infection (e.g., within hours); clinical signs of deeper infection; organ dysfunction; toxic or septic appearance; and/or limb-threatening infection

- Obtain CBC, CRP, blood culture; send STAT gram stain and wound culture and wound "skin and soft tissue MSSA/MRSA PCR swab" (needs a separate swab from the wound culture).
- Consult Infectious Diseases (ID)
- *If signs of sepsis/septic shock*: follow Septic Shock Pathway
- *If signs of necrotizing fasciitis*: STAT ultrasound, STAT Surgery consult, STAT ID consult

Do not delay antibiotic management for imaging
Total duration of antibiotic treatment: 7-14 days
These are initial empiric antibiotic options. ID will advise the most appropriate antibiotic therapy.

- **Vancomycin IV:**
  - <52 weeks PMA‡/about <3 mo old: 15 mg/kg q8hr or as determined by pharmacy based on estimated AUC
  - ≥52 weeks PMA‡/about ≥3 months old – 11 years old: 70 mg/kg/day div q6hr (max 3 g/day)
  - ≥12 yrs old: 60 mg/kg/day div q8hr (max 3 g/day)
- **AND Cefazolin IV** 150 mg/kg/day div q8hr (max 2000 mg/dose)
  - *If anaphylaxis to amoxicillin, ampicillin or cefazolin, or allergy to cephalexin or cefadroxil:* order vancomycin and call ID STAT for antibiotic recommendations.
- *If renal dysfunction present*: substitute vancomycin with linezolid IV: <12 yrs old: 30 mg/kg/day div q8hr (max 600 mg/dose), ≥12 years old: 600 mg q12hr (if ≥12 years old and <45 kg: 20 mg/kg/day div q12hr, max 600 mg/dose)

If water-related infection or injury:
- **Levofloxacin IV** (max 750 mg/day)
  - 6 mo to <5 years old: 8-10 mg/kg/dose q12hr
  - ≥5 yr: 10 mg/kg/dose q24hr (max 750 mg/day)
- **AND Cefazolin IV** 150 mg/kg/day div q8hr (max 2000 mg/dose)
  - *If anaphylaxis to amoxicillin, ampicillin or cefazolin, **or** allergy to cephalexin or cefadroxil:* consult ID for first dose options.
- *If concern for vibrio (e.g. saltwater, brackish water; not a concern in fresh or flowing water)*: add doxycycline

If Toxic Shock Syndrome:
- ADD to above antibiotics (unless patient is on linezolid):
  - Clindamycin IV 40 mg/kg/day q8hr (max 900 mg/dose)

If concern for necrotizing fasciitis:
- **Piperacillin/tazobactam IV** 300-400 mg/kg/day of piperacillin component div q6hr (max 4 g/dose of piperacillin)
- **AND Linezolid IV**: <12 yrs old: 30 mg/kg/day div q8hr (max 600 mg/dose), ≥12 years old: 600 mg q12hr (if ≥12 years old and <45 kg: 20 mg/kg/day div q12hr, max 600 mg/dose)

‡PMA (Post-Menstrual Age) = gestational age + postnatal age

Admit to med/surg or PICU based on clinical status

Antibiotic Management
- Continue initial antibiotics and tailor when culture and sensitivities (or PCR results) are available
- Transition to PO medications as tolerated
  - *If on Clindamycin*: **Clindamycin PO** 30 mg/kg/day div 3 times a day (max 600 mg/dose)
  - *If on Cefazolin:* **Cephalexin PO** 75 mg/kg/day div 3 doses (max 1000 mg/dose)
- Total duration of antibiotics:
  - Moderate: 7 days
  - Severe: 7-14 days

Consults
- *If infection is severe, if there is a water-related injury, or there is no clinical improvement within 48 hours for moderate infections*: consult ID.
  - If there is pus, and no culture was taken, obtain a fresh culture.

Discharge Criteria:
clinical improvement, improving fever curve, tolerating oral medications, adequate follow-up in place (including ID, if involved in hospitalization)

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