

Gavin Newsom Mayor Communicable Disease Control & Prevention 101 Grove Street, Room 408 San Francisco, CA 94102

Phone: (415) 554-2830 Fax: (415) 554-2848 www.sfdph.org/cdcp

## **HEALTH UPDATE**

October 17, 2008

## MRSA and Skin and Soft Tissue Infections

The epidemiology of *Staphylococcus aureus* infections is evolving. Skin and soft tissue infections (SSTIs) can be challenging to treat with the emergence of increasing antibiotic resistance. To help local clinicians, guidelines for treatment of SSTIs were recently developed by a San Francisco working group (see pages 2-3). To improve our understanding of *S. aureus* infections, clinicians are now required to report severe cases to their local health department. This Health Update can be found at <a href="http://www.sfcdcp.org/healthalerts">http://www.sfcdcp.org/healthalerts</a>.

### **ACTIONS REQUESTED OF ALL CLINICIANS:**

- 1. If your patient has a skin or soft tissue infection, follow the treatment guidelines below.
- 2. Report cases of **severe** *S. aureus* infections, as defined below, to the SFDPH Communicable Disease Control Unit (CDCU) at 415-554-2830.

### **Background**

Up to half of all people are colonized with *S. aureus* in their nares, axilla, perineum or anus. Methicillin-resistant *S. aureus* (MRSA) infections have been slowly increasing over time since the early 1960s, first in hospitalized patients and more recently among people outside the healthcare setting. Community-associated (CA) MRSA is **now endemic in the San Francisco Bay Area**, and **must be considered in all patients with infection suspicious for** *S. aureus* **infection (such as SSTI) even if the patient is healthy and has no traditional healthcare risk factors for MRSA. All MRSA strains are resistant to beta-lactams (e.g., penicillins and cephalosporins, like cephalexin (Keflex®)) and sometimes at least one other drug class.** 

The San Francisco Department of Public Health (SFDPH) convened an MRSA working group to develop San Francisco-specific outpatient guidelines for the treatment of SSTIs in response to increasing community-associated MRSA infections. These guidelines were created with input from infectious disease specialists, surgeons, and pharmacists from San Francisco General Hospital (SFGH)/University of California, San Francisco (UCSF) (see acknowledgements). Please disseminate the guidelines widely and post in your clinic sites.

SFDPH recently (July 2008) updated the MRSA webpage including our Frequently Asked Questions regarding MRSA. These are available at <a href="http://www.mrsasf.org">http://www.mrsasf.org</a>.

As of February 14, 2008, the California legislature added **severe** *S. aureus* infections to the statewide list of reportable diseases that health care providers are mandated to report to their local health department. Severe cases are defined as "those in which there is an infection in a previously healthy person that results in death or admission to a hospital intensive care unit." Previously healthy is defined as "a person who has not been hospitalized or had surgery, dialysis, or residency in a long-term care facility in the past year, and did not have an indwelling catheter or percutaneous medical device at the time of culture." The case report form is available on our website at <a href="http://www.mrsasf.org">http://www.mrsasf.org</a>.

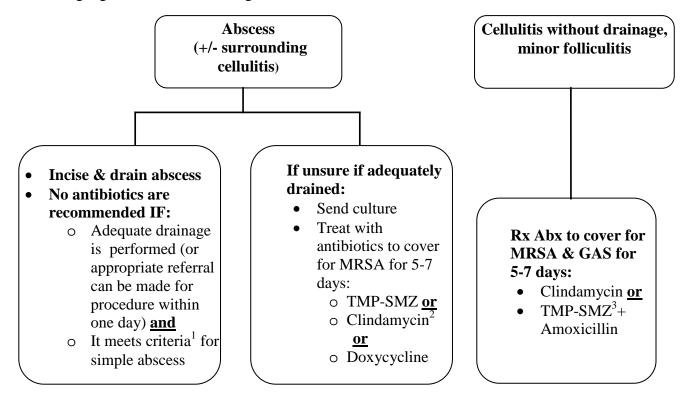
# Outpatient Treatment Guidelines for Skin & Soft Tissue Infections in the era of increasing Community-Associated MRSA

- 1. For simple, drainable abscess(es) not involving deeper structures, incision & drainage (I&D) is the treatment of choice alone. Antibiotics are not necessary or recommended if the following criteria are met:
  - i. Adequate I & D can be performed, or appropriate referral can be made for procedure within one day
  - ii. No systemic signs (afebrile, otherwise stable and a candidate for outpatient therapy)
  - iii. No abscess is present on the face

If these criteria are met, I & D is preferable to antibiotics.

- 2. There is no evidence that mildly immunosuppressive underlying conditions such as diabetes mellitus or HIV would change this recommendation.
- 3. Send wound culture (ideally obtained from I & D) if:
  - i. Patient doesn't meet the criteria above and will need antibiotics
  - ii. Patient has recurrent skin and soft tissue infections

See following algorithm for additional guidance:



<sup>1</sup>Criteria for simple abscess:

- No systemic signs (afebrile, otherwise stable and a candidate for outpatient therapy)
- No abscess is present on the face

<sup>&</sup>lt;sup>2</sup>If patient has risk factors for healthcare-associated MRSA (hospitalized or had surgery, dialysis, or residency in a long-term care facility in the past year, or an indwelling catheter or percutaneous medical device at the time of culture), clindamycin is NOT recommended.

<sup>&</sup>lt;sup>3</sup>Doxycycline is an acceptable alternative to TMP-SMZ if patient has allergy or contraindications to TMP-SMZ

### San Francisco Department of Public Health

### Other miscellaneous guidance:

- Impetigo may still be treated empirically with antibiotics to cover Group A Streptococcus (GAS) and Methicillin-sensitive *Staphylococcus aureus* (MSSA) such as cephalexin or dicloxacillin.
- Once culture results are available, if MSSA is recovered, a beta-lactam antibiotic such as cephalexin or dicloxacillin is preferable.
- These infections can be extremely painful and recommendation or prescription of pain relief medication may be appropriate.
- Criteria to consider hospital admission:
  - o Systemically ill (fevers, chills)
  - o Failed outpatient therapy
  - o Parenteral therapy indicated secondary to severely immunosuppressive conditions (e.g. AIDS, chemotherapy, etc.)
- Decolonization/Eradication:
  - O There is insufficient data to recommend the routine use of intranasal mupirocin or any specific decolonization or eradication regimens. Various studied regimens have not been proven effective in preventing re-infection or primary or secondary transmission in the community. Consider consultation with an Infectious Disease specialist for recommendations for specific circumstances such as patients with recurrent SSTIs.

#### **ANTIBIOTICS**

Drug	Adult Dose	Pediatric Dose	Advantages	Disadvantages
Clindamycin	300mg po TID	30mg/kg/day divided TID	<ul> <li>GAS, MRSA &amp; MSSA activity</li> <li>Excellent tissue &amp; abscess penetration</li> </ul>	<ul> <li>Potential for resistance</li> <li>Taste (suspension)</li> <li>C. difficile risk</li> </ul>
Trimethoprim- Sulfamethoxazole (TMP/SMZ)	2 DS po BID (<50 kg: 1 DS TID)	Trimethoprim 8- 12mg/kg/day Sulfamethoxazole 40-60mg/kg/day divided BID	<ul> <li>Extremely low resistance</li> <li>MSSA &amp; MRSA activity</li> </ul>	<ul> <li>Unreliable for GAS</li> <li>Not recommended for women in 3<sup>rd</sup> trimester</li> </ul>
Doxycycline	100 mg po BID	>8 years old only: 2-4mg/kg/day divided BID	<ul><li>Low resistance</li><li>MSSA &amp; MRSA activity</li></ul>	<ul><li>Unreliable for GAS</li><li>Not for use in &lt;8 yo or pregnant women</li></ul>
Amoxicillin	500-875 mg po BID	25-45 mg/kg/day divided BID	Inexpensive, palatable	GAS activity only, doesn't cover <i>S. aureus</i>

# **Acknowledgements:**

Thank you to the following contributors to these guidelines:

- Erica Pan, MD, MPH, Communicable Disease Control & Prevention Section, SFDPH
- Henry Chambers, MD, Chief, Division of Infectious Diseases, SFGH
- Lisa Winston, MD, Hospital Epidemiologist, SFGH
- David Young, MD, Professor of Surgery (Plastics), UCSF & Director, ISIS Clinic, SFGH
- Daniel Deck, PharmD, Infectious Diseases Clinical Pharmacist, SFGH
- Adam Hersh, MD, PhD, Pediatric Infectious Disease Fellow, UCSF
- Jeff Klausner, MD, Director, STD Section, SFDPH