

# Expert Reviews Treatment Options for CA-MRSA

BY DOUG BRUNK

SAN DIEGO — Clindamycin and trimethoprim-sulfamethoxazole are the most commonly used agents to treat community-acquired methicillin-resistant *Staphylococcus aureus* on an outpatient basis, but neither is perfect, according to one expert

"The issue with clindamycin is that if you have big loads of bacteria, inducible resistance can develop," Dr. Alice L. Pong said at a meeting sponsored by Rady Children's Hospital and the American Academy of Pediatrics. "So even though the bug might be susceptible on paper, over time it might develop resistance."

Other strikes against clindamycin include its poor palatability—"most kids

**'The issue with clindamycin is that if you have big loads of bacteria, inducible resistance can develop,' Dr. Pong said. Other strikes against the drug: It tastes bad and may cause gastrointestinal side effects, especially vomiting and diarrhea.**

will throw it up," she said—and the potential for gastrointestinal side effects, especially vomiting and diarrhea.

The recommended dosage is 20-40 mg/kg per day IV divided every 6-8 hours, and 10-30 mg/kg per day orally divided every 6-8 hours

Trimethoprim-sulfamethoxazole is more convenient than clindamycin because it requires twice-a-day administration, and "it doesn't taste too bad," said Dr. Pong of the division of infectious diseases at Rady Children's Hospital, San Diego.

However, it's not effective for group A streptococci, "so if you don't have a culture and you don't know whether it's group A streptococci or *S. aureus*, you might run into trouble."

There are limited data regarding trimethoprim-sulfamethoxazole's efficacy in treating community-acquired methicillin-resistant *S. aureus* (CA-MRSA), but "in many cases, it probably works as well as anything else," she said.

The recommended dosage is 8-12 mg/kg per day trimethoprim/40-60 mg/kg per day sulfamethoxazole given every 12 hours.

Doxycycline is another outpatient option for treating CA-MRSA, "and it works well for acne, too," she said. Approved for use in children aged 8 years and older, it has limited efficacy against group A streptococci.

The recommended dosage is 2-4 mg/kg per day given every 12 hours.

Rifampin is yet another treatment option, but the drug cannot be used alone because rapid resistance will ensue. The recommended dosage is 10-20 mg/kg per day IV or orally every 12-24 hours.

Quinolones such as levofloxacin are widely used for the treatment of MRSA in adults but are not approved for use in children in this situation. Dr. Pong said that she and her colleagues have used quinolones for treating MRSA in children "only in situations where there is no other antibiotic available."

Linezolid, a member of the new oxazolidinone class of drugs, is an expensive treatment option that is active at

the ribosomal binding site of the bacterial cell. "If you're going to give it for a prolonged period of time, you need to watch the complete blood count because linezolid can cause bone marrow suppression," Dr. Pong warned.

"But it works pretty well. We occasionally put kids on this as a drug when they are discharged home from the hospital and they've improved on vancomycin or when their organism

comes back as resistant to clindamycin and trimethoprim-sulfamethoxazole."

Practical ways to decrease antibiotic resistance, she said, include avoiding unnecessary use of antibiotics, removing foreign devices as soon as possible, preventing the transmission of resistant organisms, and practicing good infection control, especially hand washing.

Dr. Pong reported that she had no financial conflicts to disclose. ■



Relief that fits *more* lives



ProAir® HFA—the #1 albuterol inhaler<sup>1</sup>

In 2008, there were over 14 million prescriptions for ProAir HFA, more than all other albuterol HFA inhalers combined<sup>1</sup>

ProAir® HFA is indicated in patients 4 years of age and older for the treatment or prevention of bronchospasm with reversible obstructive airway disease and for the prevention of exercise-induced bronchospasm.

**Important Safety Information**

- † Inhaled albuterol sulfate can produce paradoxical bronchospasm that may be life-threatening. It should be recognized that paradoxical bronchospasm, when associated with inhaled formulations, frequently occurs with the first use of a new canister.
- † Fatalities have been reported in association with excessive use of inhaled sympathomimetic drugs in patients with asthma.
- † ProAir® HFA, as with all sympathomimetic amines, should be used with caution in patients with cardiovascular disorders (especially coronary insufficiency, cardiac arrhythmias, and hypertension), convulsive disorders, hyperthyroidism, and diabetes.
- † Potential drug interactions can occur with beta-blockers, diuretics, digoxin, or monoamine oxidase inhibitors, and tricyclic antidepressants.
- † Do not exceed the recommended dose.
- † Adverse events, which occurred at an incidence rate of at least 3% with ProAir® HFA, include headache, tachycardia, pain, dizziness, pharyngitis, and rhinitis.

Please see brief summary of Full Prescribing Information on adjacent pages.



TEVA SPECIALTY  
PHARMACEUTICALS

REFERENCE: 1. IMS Health National Prescription Audit, Total Rx Data, November 2008.

ProAir® HFA is a registered trademark of Teva Specialty Pharmaceuticals LLC.

©2009 Teva Specialty Pharmaceuticals LLC. 090393

ProAir® HFA

(albuterol sulfate)  
Inhalation Aerosol

Fits More Lives