

Mupirocin Resistance

- Report in 1987 to MSSA
- 1.3% in Latin America; 7.0% in US
- 4.6%-17.8% to MRSA; Europe, Latin America, US (14.1%)

Diag Microbiol Infect Dis 2002;42:283

Antimicrob Agents Chemo 2006;50:2583

Mupirocin Resistance

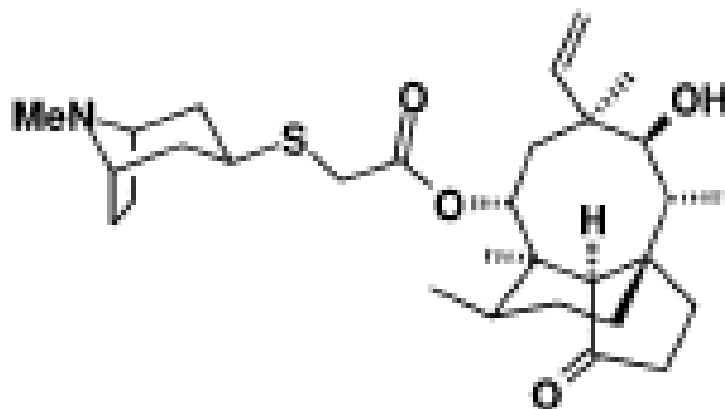
- 108 *S. aureus* isolates (adults)
 - 50 (46%) *S aureus*
 - 58 (54%) CONS
- More resistance w/ CONS
- Of *S aureus* isolates
 - MSSA; NONE
 - MRSA; 4/15 (27%)

J Clin Microbiol 2005; 43: 4266

Retapamulin

- ❑ Pleuromutilin
- ❑ Inhibit bacterial synthesis via inhibition Lg ribosomal subunit, inhibits peptidyl transferase
- ❑ No cross-reactivity to other antimicrobials
- ❑ Low bacterial resistance
- ❑ Skin infections

GSK; IDSA, October 2005



Methicillin- and Mupirocin-Resistance in Community-Associated *S. aureus* Obtained from Uncomplicated Skin and Skin Structure Infections (SSSIs) in the United States in 2004–2005; Retapamulin Surveillance Study

Table 1. MIC ($\mu\text{g}/\text{mL}$) Summary for Retapamulin Activity against 994 *S. aureus* Isolates Recovered from SSSIs

Phenotype ^{a,b} (n)	MIC ($\mu\text{g}/\text{mL}$)		
	Range	MIC ₅₀	MIC ₉₀
All <i>S. aureus</i> (994)	0.015–0.5	0.06	0.12
Methicillin-susceptible (578)	0.015–0.5	0.06	0.12
Methicillin-resistant (416)	0.03–0.5	0.06	0.12
Mupirocin-susceptible (891)	0.015–0.5	0.06	0.12
Mupirocin-resistant (103)	0.03–0.5	0.06	0.12
Mupirocin-resistant and methicillin-susceptible (42)	0.03–0.5	0.06	0.12
Mupirocin-resistant and methicillin-resistant (61)	0.03–0.25	0.06	0.12

^aPhenotypes were determined by the *in vitro* susceptibility of the respective antimicrobial agent against the corresponding organism as defined in CLSI document M100-S15 unless otherwise noted;⁶ methicillin = oxacillin activity.

^bMupirocin susceptibility breakpoints ($\leq 4 \mu\text{g}/\text{mL}$ susceptible; $\geq 8 \mu\text{g}/\text{mL}$ resistant) as defined by Finlay et al.⁷

GSK; IDSA, October, 2005

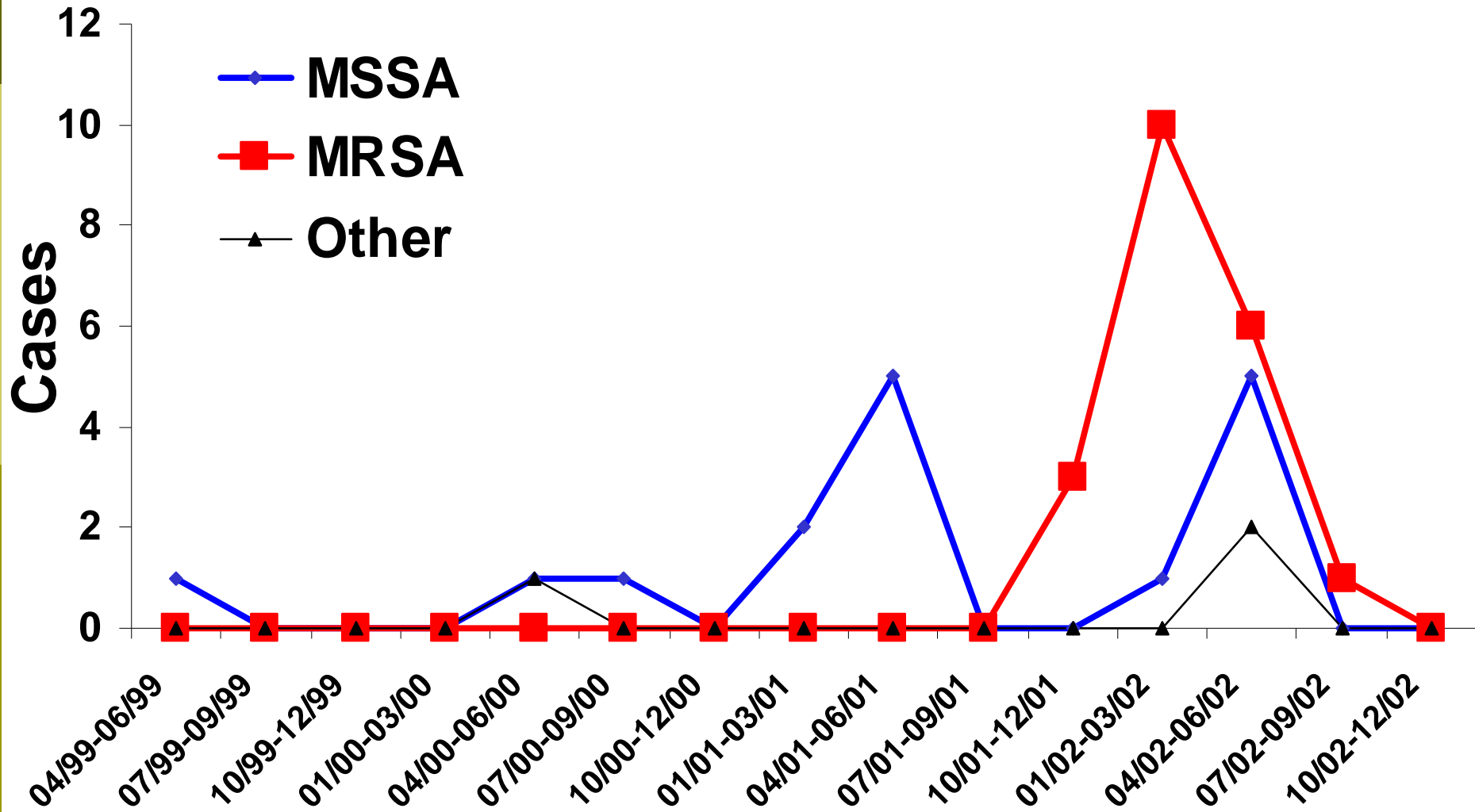
Sodium hypochlorite and skin antiseptics

- ❑ Effective against both gram +/- bacteria
- ❑ Examined at variety of concentrations as wound dressing
- ❑ Bactericidal at concentrations as low as 0.025%
- ❑ Possible effect on water holding capacity stratum corneum in AD

J Burn Care Rehabil 1991; 12: 420

J Dermatol 2003; 30: 196

Sodium Hypochlorite - MRSA



Sodium Hypochlorite/MRSA

<i>Underlying Illness</i>	8/01-7/02 *	8/02-7/03	8/03-7.04
<i>Asthma</i>	65	18	6
<i>Eczema</i>	60	25	6
<i>RAD</i>	26	12	2

Data supplied by Drs Mason and Kaplan