

P1805 **Community-acquired skin and soft tissue infection in Europe, Asia, and Latin America: frequency of organism occurrence and antimicrobial activity of ceftaroline and comparator agents**

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**Background:** Community-acquired skin and soft tissue infection (CA-SSTI) represents a common cause of hospitalisation. Ceftaroline fosamil is approved for the treatment of complicated SSTI, including those caused by methicillin-resistant *Staphylococcus aureus* (MRSA). We evaluated the frequency and antimicrobial susceptibility of organisms isolated from patients hospitalised with CA-SSTI in Europe (EU), the Asia-Pacific region (APAC), and Latin America (LATAM).

**Materials/methods:** Isolates (n=5,120) were consecutively collected from patients with CA-SSTI in 2014–2016 from 63 medical centres from 41 nations, stratified as follows: western EU (W-EU; 20 centres/10 nations), eastern EU and the Mediterranean region (E-EU; 16 centres/12 nations), APAC (16 centres/10 nations), and LATAM (11 centres/9 nations). Isolates obtained from outpatients or <48 hours after hospitalisation were considered community-acquired. Organisms were tested for susceptibility against ceftaroline and comparator agents by reference broth microdilution methods in a central laboratory. EUCAST breakpoint criteria were applied.

**Results:** SA was the most common CA-SSTI organism in all regions, except LATAM, and represented 43.3% of the overall collection. MRSA rates varied from 15.8% (E-EU) to 27.6% (APAC), 18.5% overall. In general, 98.9% of SA and 94.2% of MRSA isolates were susceptible to ceftaroline, with 99.5% of MRSA isolates inhibited at ≤2 mg/L (0.5% resistant). *Escherichia coli* ranked number 2 overall (14.2%) and number 1 in LATAM (31.5%), with ESBL-phenotype rates varying from 16.5% (W-EU) to 34.8% APAC, 22.8% overall. Beta-haemolytic streptococci (BHS; 8.2%), *Enterococcus* spp. (7.5%), *Klebsiella* spp. (6.0%), and *Enterobacter* spp. (5.5%) ranked third, fourth, fifth, and sixth overall, respectively. BHS isolates were highly susceptible to ceftaroline (MIC<sub>90</sub>, ≤0.015 mg/L; highest MIC, 0.03 mg/L; 100.0% susceptible), but exhibited decreased susceptibility to tetracycline (59.4%) and erythromycin (82.8%). Vancomycin resistance among enterococci varied from 2.8% (E-EU) to 10.5% (APAC), 8.4% overall, and ESBL-phenotype rates among *Klebsiella* spp. varied from 28.6% (APAC) to 56.7% (E-EU), 38.0% overall. Among *Enterobacter* spp., susceptibility to ceftaroline/ceftazidime varied from 70.8/75.8% in W-EU to 44.8/48.3% in LATAM, 62.8/67.0% overall.

**Conclusions:** The frequency and antimicrobial susceptibility of bacteria isolated from patients with CA-SSTI varied broadly by geographic region. Ceftaroline exhibited potent activity against SA (including MRSA), BHS and non-ESBL-phenotype Enterobacteriaceae isolates.

Organism (total no.)	% Susceptible to ceftaroline [rank order]				
	W-EU (n=3,250)	E-EU (n=839)	APAC (n=666)	LATAM (n=365)	All regions (n=5,120)
<i>S. aureus</i> (2,216)	99.0 [1]	99.1 [1]	98.5 [1]	98.1 [2]	98.9 [1]
MRSA (411) <sup>a</sup>	94.4	94.1	93.9	93.1	94.2
MSSA (1,805)	100.0	100.0	100.0	100.0	100.0
<i>E. coli</i> (729)	78.4 [2]	68.6 [2]	65.2 [3]	67.0 [1]	73.4 [2]
ESBL-phenotype (166)	4.6	2.0	0.0	0.0	2.4
Non-ESBL-phenotype (563)	93.0	96.0	100.0	95.1	94.3
BHS (418)	100.0 [3]	100.0 [5]	100.0 [2]	100.0 [8]	100.0 [3]

<sup>a</sup> 91.7% (22/24) of nonsusceptible isolates had MIC of 2 mg/L (intermediate based on high dose of 600mg q8h)