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Abstract (poster session)

**Resistance surveillance programme report for European nations (2011)**

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Background: In the European (EU) component of an Emerging Markets (EM) resistance (R) surveillance study (EMRS; 2011), 21 countries overall were monitored for antimicrobial R patterns including Belgium, Bulgaria (BU), Croatia (CR), Czech Republic (CZ), France (F), Germany, Greece (GR), Ireland, Israel (IS), Italy (IT), Poland (PO), Portugal, Romania (RO), Russia, Slovakia (SK), Slovenia, Spain, Sweden, Turkey (T), Ukraine and UK. Methods: Results from testing 12,572 strains (100 [BU] to 1535 [F] per nation) were interpreted by CLSI, EUCAST and USA-FDA breakpoints. Samples from 47 sites were reference tested versus potent, marketed agents: linezolid (LZD), vancomycin (VAN), tigecycline (TIG), colistin (COL), cefoperazone/sulbactam (C/S), amikacin (AMK), levofloxacin (LEV) and 21 others. R mechanisms were screened by PCR. Results: Among *S. aureus* (SA; Table), LZD (MIC90, 1 mg/L), TIG (MIC90, 0.12 mg/L) and VAN (MIC90, 1 mg/L) exhibited complete coverage and MRSA rates among EM nations ranged from 16% (BU) to 60% (PO, RO, SK). LZD-R-CoNS (7) were noted in 4 western EU nations and in a *S. simulans* strain (MIC, 8 mg/L) from RO having L3 mutations (N130D, G152A, F147S, A157R); also 4 LZD-R enterococci. VRE (87% VanA) were noted in CZ (13%), IS (4%), RO (5%) and T (20%). ESBL rate for *E. coli* was 20% (range, 10% [CR, SK] to 70% [BU]), best inhibited by COL (100% S), TIG (100%) AMK (83%), C/S (88%) and carbapenems (99%; R strains in IS & T). *Klebsiella* spp. had greater ESBL rates (46% overall, range 31-100%) as well as carbapenem-R (9% overall, greatest in BU, GR, IS, IT, PO, RO). Nonfermentors (*P. aeruginosa*, *Acinetobacter* [ACB]) were generally very R except against COL (99% S) and TIG (95% S at  $\leq 2$  mg/L; ACB only). The following carbapenemases were noted: VIM-1 (2 countries); IMP-1 (1 from T); KPC-2 or -3 (2 countries); VIM-4 (1 from PO), NDM-1 (2 in RO; 2 centres); and OXA-48 or -162 (5 from T; 2 centres). Conclusions: EU surveillance sampling demonstrates a wide array of R isolates, less prevalent among Gram-positives that remain inhibited by available agents (LZD, TIG, VAN). However, beta-lactamase-mediated-R has spread widely among Gram-negatives, especially across the eastern EU and EM nations, severely limiting infection chemotherapy.

Antimicrobials	EU S rates (EUCAST criteria) for key Gram-positive pathogens (no.): <sup>a</sup>				
	SA (2413)	CoNS (622)	ENT (555)	SPN (631)	BHS (410)
Oxacillin <sup>b</sup>	69	26	64	69	100
LZD	100	99 <sup>c</sup>	99 <sup>d</sup>	100	100
TIG	100	100	100	100	100
VAN	100	99	90	100	100
Macrolides <sup>e</sup>	67	35	-	69	78
LEV	71	46	-	-	95
TMP/SMX	99	62	48	72	98
Ceftriaxone	69	26	-	81	100

a. ENT=enterococci; SPN=*S. pneumoniae*; BHS= $\beta$ -haemolytic streptococci. b. Ampicillin for ENT and penicillin for the streptococci c. R strains from F, GR, IT, RO and Spain. d. R strains from Germany, Ireland and T. e. S rates for erythromycin-like agents.