

**EV0315****ePoster Viewing****Resistance surveillance & epidemiology: MRSA, VRE & other Gram-positives****Susceptibility of Gram-positive anaerobic pathogens isolated from patients in Europe over nine years; TEST program 2007-2015**

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**Background:** Anaerobic pathogens are often involved in complicated mixed infections that can be problematic to treat with currently available antimicrobial agents. Routine susceptibility testing for anaerobic clinical isolates is limited, therefore *in vitro* surveillance studies are important in providing information that can be used for clinical decisions in the choice of empiric antimicrobial therapy. This study analyzes the antimicrobial susceptibilities of gram-positive anaerobic clinical isolates from the Tigecycline European Surveillance Trial (TEST), 2007-2015.

**Material/methods:** 3,988 gram-positive anaerobic pathogens (2,459 anaerobic cocci and 1,529 *Clostridium* spp., not including *C. difficile*) were collected over the years 2007-2015 from 18 sites in 7 countries in Europe (Belgium, Czech Republic, France, Germany, Hungary, Spain, and United Kingdom). Organism identification was confirmed at a central laboratory (IHMA, Inc., Schaumburg, IL, US), and MIC values determined using agar dilution following CLSI guidelines. Percent susceptible (%S) was calculated using EUCAST breakpoints where available (clindamycin, meropenem, metronidazole, penicillin, and piperacillin-tazobactam) and FDA breakpoints for tigecycline.

**Results:** MIC<sub>90</sub> values and percent susceptible (%S) broken out by combined yearly groups is shown in the table. Years 2007-2009 and 2013-2015 are shown to demonstrate changes in susceptibility over eight years.

Antimicrobial	MIC <sub>90</sub> /%S			
	Anaerobic cocci		<i>Clostridium</i> spp.*	
	2007-2009	2013-2015	2007-2009	2013-2015
(N)	(922)	(734)	(528)	(548)
Tigecycline	0.12/100	≤0.06/100	1/99.1	1/99.8
Clindamycin	8/89.6	>8/83.8	>8/81.8	>8/84.7
Meropenem	0.12/99.8	0.25/99.7	1/98.5	1/98.2
Metronidazole	0.5/99.8	1/99.7	2/98.1	2/100
Penicillin	0.5/87.2	0.5/87.1	1/68.8	1/60.8
Piperacillin Tazobactam	0.25/99.2	0.25/98.0	4/95.5	8/94.9

\*Does not include *C. difficile*

**Conclusions:** Tigecycline, meropenem, metronidazole and piperacillin-tazobactam continued to show potent *in vitro* activity against anaerobic gram-positive pathogens from 2013-2015. Clindamycin, meropenem, and metronidazole showed decreased activity against anaerobic cocci from 2007-2009 to 2013-2015 as measured by at least a 2-fold increase in the MIC<sub>90</sub>, whereas only clindamycin showed a notable decrease in percent susceptible. Piperacillin-tazobactam was the only compound showing

an increase in the MIC<sub>90</sub> for *Clostridium* spp. As most anaerobic infections are treated empirically, monitoring resistance trends through surveillance studies is essential.