AOTEA PATHOLOGY
- CLINICAL UPDATE

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JUNE 2014

Antibiotic Susceptibility Tables 2013

We are pleased to release the antibiotic susceptibility profiles of pathogens most commonly isolated from specimens you have submitted to Aotea Pathology. The agents reported are those which you would commonly use for treatment. First line treatment remains as per treatment guidelines.

Of interest;

Urine

- 28% of urinary isolates of E.coli are resistant to Trimethoprim. This may reflect a selection bias because we are not investigating first presentation of uncomplicated UTI
- 3% of urinary E.coli isolates are ESBL producers
- Nitrofurantoin remains an excellent choice of antibiotic for patients infected with ESBL isolates

MRSA

- 7.5% of all S.aureus isolates are MRSA
- Cotrimoxazole remains and excellent antibiotic choice for treatment of MRSA infections (99% susceptibility)

For further information please phone (04) 381 5900 or contact Clinical Microbiologist,
Dr Mark Jones mjones@apath.co.nz or Head of Microbiology Department, Mackenzie Nicol, mnicol@apath.co.nz

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Gram Negative Isolates % Susceptible 2013

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Gram Negative Organism	E.coli (Urinary)	[2] ESBL *E.coli*	Klebsiella pneumoniae	ESBL other *(not E. coli) (Urinary)*	Proteus mirabilis	Pseudomonas aeruginosa	Haemophilus influenzae	[1]ESCAPPM organisms
Amoxycillin	**58%** (38)						**79%** (383)	
Amox/Clavulanic Acid	**96%** (7610)	**77%** (212)	**95%** (458)	**60%** (40)	**99%** (291)		**100%** (381)	
Ceftazidime						**99%** (378)		
Gentamicin		**54%** (212)		**48%** (40)		**91%** (412)		
Trimethoprim	**74%** (7746)	**19%** (212)	**70%** (466)	**19%** (40)	**74%** (294)			**87%** (223)
Ciprofloxacin						**95%** (408)		
Norfloxacin	**94%** (7528)	**40%** (212)	**95%** (452)	**60%** (40)	**98%** (284)	**92%** (135)		**96%** (219)
Nitrofurantoin	**99%** (7530)	**96%** (212)	**70%** (476)	**55%** (40)	R[3]			**74%** (219)
Piperacillin/Tazobactam						**99%** (378)		
Cefaclor	**96%** (7510)		**93%** (454)		**99%** (290)		**98%** (383)	
Imipenem		**100%** (212)		**100%** (40)				
Tetracycline		**15%** (26)		**31%** (16)			**99%** (378)	

Footnotes

[1]ESCAPPM organisms (those included in this data are underlined) Enterobacter sp, Serratia marcescans, Citrobacter sp, Aeromonas sp, Providencia sp, Pantoea sp, Proteus sp (indole positive only), Morganella morganii - may develop resistance during prolonged treatment with third generation cephalosporins

[2]ESBL - extended spectrum beta lactamase producer

[3] Nitrofurantoin is not active at alkaline pH

N.B. 3% of all urinary *E. coli* isolates reported were ESBL producers

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Gram Positive Isolates % Susceptible 2013

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Gram Positive Organism	Methicillin susceptible S. aureus (MSSA)	Methicillin resistant S. aureus (MRSA) [1]	Streptococcus pyogenes (Group A strep)	Streptococcus agalactiae (Group B strep) [2]	Streptococcus pneumoniae	Enterococcus faecalis
Penicillin	**13%** (6996)	**0%** (567)	**100%**[3]		**88%** (160)	
Amoxycillin						**100%** (935)
Flucloxacillin	**100%** (7009)	**0%** (567)				
Erythromycin	**87%** (6975)	**71%** (567)	**96%** (90)	**85%** (481)	**90%** (159)	
Cotrimoxazole	**99%** (6900)	**99%** (567)				
Tetracycline		**96%** (513)			**92%** (159)	
Clindamycin		**87%** (516)		**84%** (480)		
Ciprofloxacin		**78%** (516)				
Rifampicin		**100%** (511)				
Gentamicin		**97%** (512)				
Vancomycin						**100%** (936)
Fusidic Acid		**71%** (517)				
Mupirocin		**90%** (517)				
Nitrofurantoin						**100%** (936)

Footnotes

[1] 7.5% of all *Staphylococcus aureus* isolates reported were MRSA

[2] Data for *S. agalactiae* is for period 1/2/13 - 31/12/13 only

[3] Beta haemolytic Streptococci are universally susceptible to penicillin