

PUBLISHED BY ALLIANCE FOR THE PRUDENT USE OF ANTIBIOTICS (APUA)-NEPAL

Editorial...

This is the seventeenth newsletter that APUA-Nepal presents you with. We hope that this newsletter will help us all in its small way, to not lose our focus from ever increasing problem of bacterial resistance.

APUA-Nepal intends to bring out its newsletter regularly to update our valued members about its activities, recent scenario and advancement in the field of anti-microbial resistance. We will indeed be grateful if you could contribute in any way possible by your suggestions, advice and comments.

We also like to request anyone working in the field of health profession to join us, to become member of APUA-Nepal.

We like to thank everyone who was involved in bringing out this newsletter.

Lastly, we intend to present this newsletter to our readers as a Dashain greetings. So, please accept our Dashain and Tihar greetings.

COMPARATIVE STUDY OF SENSITIVITY PATTERNS OF COMMON ISOLATES IN TRIBHUVAN UNIVERSITY TEACHING HOSPITAL (TUTH)

APUA- Nepal published antibiotic sensitivity patterns of common isolates in urine, blood and pus samples from different hospitals (regional, zonal and medical college teaching hospital) of Nepal in its Newsletter published from 2004 to 2019. The average sensitivity percentage in 2009 from TUTH is compared with average sensitivity percentage from the same hospital in 2018. The data published earlier in the Newsletter have been used. The average sensitivity percentage in isolates from May or June to July or August were included in the Newsletter. The results show differences in sensitivity patterns of isolates and use of antibiotic discs for sensitivity testing.

Urine Isolates

Antibiotic Sensitivity	May to July 2009(% isolates sensitive) n= 726	% isolates sensitive May - July 2018 (n= 531)
<i>E. coli</i>		
Amikacin	89.4	92.0
Amoxicillin + clavulanic	DNU	37.0
Ampicillin	13.3	26.0
Ampicillin + sulbactam	DNU	80.0
Cefepime	DNU	76.0
Cefixime	DNU	43.0
Cefoperazone + sulbactam	DNU	85.0
Cefotaxime	45.6	DNU
Ceftazidime	DNU	96.0
Ceftriaxone	51.0	43.0
Cephalexin	10.6	DNU
Chloramphenicol	DNU	93.0
Ciprofloxacin	DNU	46.0
Colistin	DNU	100.0
Cotrimoxazole	40.6	45.0
Doxycycline	DNU	81.0
Gentamycin	67.8	85.0
Imipenem	DNU	93.0
Levofloxacin	DNU	73.0
Meropenem	DNU	94.0
Nalidixic Acid	29.5	DNU
Nitrofurantoin	84.5	80.0
Norfloxacin	44.7	41.0
Piperacillin + tazobactam	DNU	85.0
Tigecycline	DNU	92.0

* DNU= Disc not used

ACTIVITIES BY APUA-NEPAL IN LAST ONE YEAR

- Publication and distribution of Vol 16 of APUA-Nepal Newsletter to different medical colleges and hospitals.
- Participation in a high-level advocacy meeting on national antimicrobial consumption (AMC) monitoring, MOHP/WHO, July 2019.
- Participation in National Action Plan-AMR (draft) workshop, MOHP/WHO, August 2019.
- Participation in launching of Health Workers' Education and Training on AMR: Curricula Guide, WHO, October 2019.
- Participation in NAP-AMR finalization workshop, MOHP/WHO, November 2019.

COMPARATIVE STUDY

Antibiotic Sensitivity	May to July 2009 (%isolates sensitive) n= 85	% isolates sensitive May - July 2018 (n=33)	Antibiotic Sensitivity	May to July 2009 (%isolates sensitive)	% isolates sensitive May - July 2018 (n = 80)
<i>S. aureus</i>			<i>K. pneumoniae</i>		
Amikacin	67.3	100.0	Amikacin	Not among	73.0
Ampicillin	16.5	57.0	Ampicillin + sulbactam	three common	41.0
Cephalexin	36.3	71.0	Cefepime	isolates	61.0
Ciprofloxacin	DNU	65.0	Cefixime		43.0
Clindamycin	DNU	80.0	Ceftazidime		44.0
Cloxacillin	60.2	72.0	Ceftriaxone		43.0
Cotrimoxazole	44.2	79.0	Cefoperazone + sulbactam		79.0
Doxycycline	DNU	100.0	Ciprofloxacin		56.0
Gentamycin	62.8	89.0	Chloramphenicol		76.0
Levofloxacin	DNU	75.0	Colistin		100.0
Nitrofurantoin	95.6	93.0	Cotrimoxazole		47.0
Norfloxacin	52.4	67.0	Doxycycline		73.0
Teicoplanin	DNU	100.0	Gentamicin		64.0
Tigecycline	DNU	100.0	Imipenem		85.0
Vancomycin	DNU	100.0	Levofloxacin		57.0
			Meropenem		82.0
			Nitrofurantoin		35.0
			Norfloxacin		47.0
			Piperacillin + tazobactam		69.0
			Tigecycline		100.0
Antibiotic Sensitivity	May to July 2009 (%isolates sensitive) n= 53	% isolates sensitive May - July 2018 (n=69)	Blood Isolates		
			Antibiotic Sensitivity	May to July 2009 (%isolates sensitive) n= 92	% isolates sensitive May - July 2018 (n= 76)
<i>E. faecalis</i>			<i>S. enterica Typhi</i>		
Ampicillin	25.6	43.0	Amoxicillin + clavulanic	DNU	97.0
Ampicillin + sulbactam	DNU	56.0	Ampicillin	90.3	96.0
Amoxicillin + clavulanic	DNU	56.0	Azithromycin	100.0	79.0
Ciprofloxacin	DNU	25.0	Cefixime	DNU	98.0
Doxycycline	DNU	85.0	Cefotaxime	100.0	DNU
Gentamicin	DNU	51.0	Ceftazidime	100.0	DNU
Levofloxacin	DNU	34.0	Ceftriaxone	100.0	98.0
Nitrofurantoin	75.0	66.0	Chloramphenicol	93.4	DNU
Norfloxacin	25.3	25.0	Ciprofloxacin	100.0	28.0
Piperacillin + tazobactam	DNU	84.0	Cotrimoxazole	93.4	100.0
Tigecycline	DNU	100.0	Imipenem	100.0	DNU
Teicoplanin	DNU	100.0	Levofloxacin	DNU	49.0
Vancomycin	100.0	100.0	Nalidixic Acid	48.4	DNU
			Ofloxacin	100.0	60.0

Antibiotic Sensitivity	May to July 2009(%isolates sensitive) n= 110	% isolates sensitive May - July 2018 (n= 7)	Antibiotic Sensitivity	May to July 2009 (%isolates sensitive) n=138	% isolates sensitive May - July 2018 (n=152)
<i>S. enterica Paratyphi A</i>			<i>E. coli</i>		
Amoxicillin + clavulanic	DNU	100.0	Amikacin	85.8	76.0
Ampicillin	91.8	100.0	Amoxicillin + clavulanic	DNU	15.0
Azithromycin	100.0	80.0	Ampicillin + sulbactam	DNU	28.0
Cefixime	DNU	100.0	Ampicillin	6.6	12.0
Cefotaxime	100.0	DNU	Cefepime	DNU	45.0
Ceftazidime	100.0	DNU	Cefixime	DNU	24.0
Ceftriaxone	100.0	100.0	Cefoperazone + sulbactam	DNU	66.0
Chloramphenicol	94.5	DNU	Cefotaxime	57.8	DNU
Ciprofloxacin	100.0	20.0	Ceftazidime	DNU	33.0
Cotrimoxazole	94.5	100.0	Ceftriaxone	42.8	24.0
Imipenem	100.0	DNU	Cephalexin	8.9	DNU
Levofloxacin	DNU	43.0	Chloramphenicol	DNU	71.0
Nalidixic Acid	34.6	DNU	Ciprofloxacin	46.4	38.0
Ofloxacin	100.0	33.0	Colistin	DNU	100.0
			Cotrimoxazole	41.7	41.0
Antibiotic Sensitivity	May to July 2009(%isolates sensitive)	% isolates sensitive May - July 2018 (n= 26)	Doxycycline	DNU	49.0
<i>S. aureus</i>			Gentamicin	69.4	68.0
Amikacin	Not among three common isolates	86.0	Imipenem	DNU	88.0
Ampicillin		35.0	Levofloxacin	DNU	45.0
Cephalexin		71.0	Meropenem	DNU	87.0
Ciprofloxacin		58.0	Piperacillin + tazobactam	DNU	59.0
Chloramphenicol		89.0	Polymixin B	DNU	100.0
Clindamycin		63.0	Tigecycline	DNU	100.0
Cloxacillin		75.0			
Cotrimoxazole		62.0	Antibiotic Sensitivity	May to July 2009(%isolates sensitive) n= 249	% isolates sensitive May - July 2018 (n= 176)
Doxycycline		DNU	<i>S. aureus</i>		
Erythromycin		32.0	Amikacin	79.4	97.0
Gentamicin		72.0	Ampicillin	22.7	8.8
Levofloxacin		78.0	Cephalexin	31.6	63.0
Ofloxacin		63.0	Chloramphenicol	DNU	92.0
Teicoplanin		100.0	Ciprofloxacin	53.7	36.0
Tigecycline		83.0	Clindamycin	DNU	56.0
Vancomycin		100.0	Cloxacillin	66.0	69.0
			Cotrimoxazole	45.6	58.0
			Doxycycline	DNU	92.0
			Erythromycin	53.2	39.0
			Gentamicin	74.2	83.0
			Levofloxacin	DNU	93.0
			Meropenem	DNU	69.0
			Teicoplanin	DNU	100.0
			Tigecycline	DNU	100.0
			Vancomycin	DNU	100.0
Pus Isolates					
Antibiotic Sensitivity	May to July 2009(%isolates sensitive) n=44	% isolates sensitive May - July 2018 (n= 51)			
<i>P. aeruginosa</i>					
Amikacin	70.0	58.0			
Cefepime	DNU	57.0			
Cefoperazone + sulbactam	DNU	64.0			
Ceftazidime	24.9	67.0			
Ciprofloxacin	54.7	31.0			
Colistin	DNU	100.0			
Gentamicin	55.7	48.0			
Imipenem	DNU	82.0			
Levofloxacin	DNU	33.0			
Meropenem	DNU	88.0			
Piperacillin	80.0	69.0			
Piperacillin + tazobactam	DNU	80.0			
Polymixin B	DNU	100.0			

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1. Usefulness and quality of this newsletter

2. Suggestion for the future topics

3. Any other comments

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