

Additional file 4

Table: Mantel-Haenszel linear-by-linear chi-square test for MIC of antibiotics against pathogens in Chinese full-term neonates with IBIs, 2019-2021

	2019	2020	2021	Linear trend		Pearson-related	
<i>E. coli</i> ^a							
Ampicillin MIC (ug/ml), n (%)	n=17	n=13	n=12	$\chi^2=$	P=	R=	P=
				0.022	0.882	-0.023	0.885
≤2	1 (5.9)	1 (7.7)	1 (8.3)				
16	7 (41.2)	3 (23.1)	5 (41.7)				
≥32	9 (52.9)	9 (69.2)	6 (50.0)				
Cefepime MIC (ug/ml), n (%)	n=26	n=20	n=17	$\chi^2=$	P=	R=	P=
				0.004	0.948	0.008	0.949
≤0.12	7 (26.9)	7 (35.0)	6 (35.3)				
0.5	7 (26.9)	0 (0.0)	5 (29.4)				
1	3 (11.5)	4 (20.0)	0 (0.0)				
2	4 (15.4)	5 (25.0)	0 (0.0)				
32	4 (15.4)	2 (10.0)	5 (29.4)				
≥64	1 (3.8)	2 (10.0)	1 (5.9)				
Gentamicin MIC (ug/ml), n (%)	n=17	n=15	n=13	$\chi^2=$	P=	R=	P=
				0.335	0.563	0.087	0.569
≤1	9 (52.9)	6 (40.0)	8 (61.5)				
4	5 (29.4)	6 (40.0)	1 (7.7)				
8	2 (11.8)	0 (0.0)	1 (7.7)				
≥16	1 (5.9)	3 (20.0)	3 (23.1)				
Cefotaxime MIC (ug/ml), n (%)	n=6	n=4	n=6	$\chi^2=$	P=	R=	P=
				0.000	1.000	0.000	1.000
0.5	0 (0.0)	0 (0.0)	1 (16.7)				
1	2 (33.3)	2 (50.0)	0 (0.0)				

Table: Mantel-Haenszel linear-by-linear chi-square test for MIC of antibiotics against pathogens in Chinese full-term neonates with IBIs, 2019-2021 (continued)

	2019	2020	2021	Linear trend		Pearson-related	
<i>E. coli</i> ^a							
Cefotaxime MIC (ug/ml), n (%)	n=6	n=4	n=6	$\chi^2=$	P=	R=	P=
				0.000	1.000	0.000	1.000
>32	4	2	5				
	(66.7)	(50.0)	(83.3)				
Ceftriaxone MIC (ug/ml), n (%)	n=26	n=20	n=12	$\chi^2=$	P=	R=	P=
				1.163	0.281	0.143	0.285
≤0.25	7	7	2				
	(26.9)	(35.0)	(16.7)				
0.5	10	6	3				
	(38.5)	(30.0)	(25.0)				
32	4	1	3				
	(15.4)	(5.0)	(25.0)				
≥64	5	6	4				
	(19.2)	(30.0)	(33.3)				
Meropenem MIC (ug/ml), n (%)	n=7	n=12	n=13	$\chi^2=$	P=	R=	P=
				1.656	0.198	-0.231	0.203
≤0.25	1	5	6				
	(14.3)	(41.7)	(46.2)				
0.5	6	7	7				
	(85.7)	(58.3)	(53.8)				
<i>GBS</i> ^a							
Erythromycin MIC (ug/ml), n (%)	n=10	n=6	n=6	$\chi^2=$	P=	R=	P=
				1.200	0.273	-0.239	0.284
≤0.25	4	4	4				
	(40.0)	(66.7)	(66.7)				
≥0.5	6	2	2				
	(60.0)	(33.3)	(33.3)				
Clindamycin MIC (ug/ml), n (%)	n=12	n=6	n=4	$\chi^2=$	P=	R=	P=
				5.815	0.016 ^b	-0.526	0.012 ^b
0.125	0	4	3				
	(0.0)	(66.7)	(75.0)				
0.25	2	0	0				
	(16.7)	(0.0)	(0.0)				
1	4	0	0				
	(33.3)	(0.0)	(0.0)				
≥8	6	2	1				
	(50.0)	(33.3)	(25.0)				

Table: Mantel-Haenszel linear-by-linear chi-square test for MIC of antibiotics against pathogens in Chinese full-term neonates with IBIs, 2019-2021 (continued)

	2019	2020	2021	Linear trend		Pearson-related	
GBS ^a							
Linezolid MIC (ug/ml), n (%)	n=8	n=6	n=8	$\chi^2=$	P=	R=	P=
				1.203	0.273	-0.239	0.283
1	1	2	3				
	(12.5)	(33.3)	(37.5)				
2	7	4	5				
	(87.5)	(66.7)	(62.5)				
Vancomycin MIC (ug/ml), n (%)	n=7	n=6	n=8	$\chi^2=$	P=	R=	P=
				3.245	0.072	-0.403	0.070
≤0.5	5	6	8				
	(71.4)	(100.0)	(100.0)				
1	2	0	0				
	(28.6)	(0.0)	(0.0)				
E. Spp. ^a							
Ampicillin MIC (ug/ml), n (%)	n=7	n=8	n=19	$\chi^2=$	P=	R=	P=
				0.142	0.706	-0.066	0.712
≤2	2	3	10				
	(28.6)	(37.5)	(52.6)				
16	3	1	1				
	(42.9)	(12.5)	(5.3)				
≥32	2	4	8				
	(28.6)	(50.0)	(42.1)				
Linezolid MIC (ug/ml), n (%)	n=7	n=8	n=17	$\chi^2=$	P=	R=	P=
				0.557	0.456	-0.134	0.465
≤1	7	1	16				
	(100.0)	(12.5)	(94.1)				
2	0	7	1				
	(0.0)	(87.5)	(5.9)				
Penicillin MIC (ug/ml), n (%)	n=7	n=8	n=19	$\chi^2=$	P=	R=	P=
				0.003	0.954	-0.010	0.955
2	2	2	6				
	(28.6)	(25.0)	(31.6)				
4	0	1	2				
	(0.0)	(12.5)	(10.5)				
16	2	1	2				
	(28.6)	(12.5)	(10.5)				
32	1	0	1				
	(14.3)	(0.0)	(5.3)				
≥64	2	4	8				
	(28.6)	(50.0)	(42.1)				

Table: Mantel-Haenszel linear-by-linear chi-square test for MIC of antibiotics against pathogens in Chinese full-term neonates with IBIs, 2019-2021 (continued)

	2019	2020	2021	Linear trend		Pearson-related	
E. Spp. ^a							
High-concentration gentamicin MIC (ug/ml), n (%)	n=10	n=8	n=12	$\chi^2=$	P=	R=	P=
≤500	8 (80.0)	6 (75.0)	12 (100.0)	1.966	0.161	-0.260	0.165
>500	2 (20.0)	2 (25.0)	0 (0.0)				
Vancomycin MIC (ug/ml), n (%)	n=7	n=8	n=18	$\chi^2=$	P=	R=	P=
≤0.5	0 (0.0)	3 (37.5)	2 (11.1)	1.037	0.309	-0.180	0.316
1	6 (85.7)	3 (37.5)	16 (88.9)				
2	1 (14.3)	2 (25.0)	0 (0.0)				
S. aureus ^a							
Clindamycin MIC (ug/ml), n (%)	n=12	n=12	n=10	$\chi^2=$	P=	R=	P=
≤0.25	11 (91.7)	10 (83.3)	9 (90.0)	0.024	0.878	0.027	0.881
0.5	1 (8.3)	2 (16.7)	1 (10.0)				
Linezolid MIC (ug/ml), n (%)	n=12	n=12	n=10	NA	NA	NA	NA
2	12 (100.0)	12 (100.0)	10 (100.0)				
Vancomycin MIC (ug/ml), n (%)	n=10	n=12	n=12	$\chi^2=$	P=	R=	P=
≤0.5	3 (30.0)	5 (41.7)	9 (75.0)	4.435	0.035 ^b	-0.367	0.033 ^b
1	7 (70.0)	7 (58.3)	3 (25.0)				
Penicillin MIC (ug/ml), n (%)	n=12	n=12	n=10	$\chi^2=$	P=	R=	P=
≤0.12	2 (16.7)	4 (33.3)	5 (50.0)	4.547	0.033 ^b	-0.371	0.031 ^b
0.25	1 (8.3)	2 (16.7)	2 (20.0)				
0.5	8 (66.7)	6 (50.0)	3 (30.0)				
>8	1 (8.3)	0 (0.0)	0 (0.0)				

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	2019	2020	2021	Linear trend		Pearson-related	
<i>S. aureus</i> ^a							
Gentamicin MIC (ug/ml), n (%)	n=12	n=12	n=10	$\chi^2=$	P=	R=	P=
				0.011	0.916	0.018	0.918
≤0.5	11 (91.7)	12 (100.0)	9 (90.0)				
4	1 (8.3)	0 (0.0)	1 (10.0)				

Abbreviations: MIC, minimum inhibitory concentration; E. coli, Escherichia coli; GBS, Group B Streptococcus; E.spp., Enterococcus spp.; S. aureus, Staphylococcus aureus; NA, not available

^a A small portion of strains did not have recorded MIC values for certain antibiotics, which were excluded from this analysis.

^b P < 0.05.