

Supplementary Table 1: Gram- negative AST results for neonates

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents													% Resistance				
				Beta Lactams									Ciprofloxacin	Aminoglycosides		Cotrimoxazole	% ESBL	% CRE	% MDR	% XDR	
				Ampicillin	Augmentin	Pip-taz	Ceftaxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem		Getamycin	Amikacin						
1	<i>Escherichia coli</i>	16	Total no. isolates with sensitivities	16	16	16	16	16	16	16	15	16	15	16	16	16	19%	0%	-	-	
			No. of susceptible isolates	4	13	16	13	15	15	16	15	16	13	13	16	5					
			% Susceptible Isolates	25%	81%	100%	81%	94%	94%	100%	100%	100%	87%	81%	100%	31%					
2	<i>Klebsiella pneumoniae</i>	9	Total no. isolates with sensitivities	-	9	9	9	8	9	8	8	9	8	9	9	8	33%	11%	-	-	
			No. of susceptible isolates	-	4	5	5	5	5	8	7	8	8	4	8	5					
			% Susceptible Isolates	-	44%	56%	56%	63%	56%	100%*	88%	89%	100%	44%	89%	63%					
3	<i>Enterobacter spp.</i>	8	Total no. isolates with sensitivities	-	-	7	7	7	8	7	7	7	6	7	7	7	0%	0%	-	-	
			No. of susceptible isolates	-	-	7	7	7	8	7	7	7	6	7	7	6					
			% Susceptible Isolates	-	-	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	86%					
4	<i>Acinetobacter spp.</i>	3	Total no. isolates with sensitivities	-	-	3	-	3	3	-	3	3	3	3	1	3	-	-	0%	0%	
			No. of susceptible isolates	-	-	3	-	3	3	-	3	3	3	3	3	1					3
			% Susceptible Isolates	-	-	100%	-	100%	100%	-	100%	100%	100%	100%	100%	100%					100%
5	<i>Proteus spp.</i>	2	Total no. isolates with sensitivities	2	2	2	2	2	2	2	0	1	0	2	2	2	0%	0%	-	-	
			No. of susceptible isolates	1	2	2	2	2	2	2	-	1	-	1	2	1					
			% Susceptible Isolates	50%	100%	100%	100%	100%	100%	100%	-	100%	-	50%	100%	50%					
6	<i>Haemophilus influenzae</i>	1	Total no. isolates with sensitivities	1	0	0	0	-	0	0	1	-	1	-	-	1	-	-	-	-	
			No. of susceptible isolates	1	-	-	-	-	-	-	1	-	1	-	-	0					
			% Susceptible Isolates	100%	-	-	-	-	-	-	100%	-	100%	-	-	0%					

* fewer susceptibility results were available for ertapenem, hence the lowest susceptibility result for a carbapenem was used to determine the CRE rate.

AST=antimicrobial susceptibility testing; spp.= species; No.= number; Pip-taz= piperacillin-tazobactam; ESBL= extended spectrum beta lactamase; CRE= carbapenem resistant Enterobacterales; MDR= multidrug resistant; XDR= extensively drug resistant

Supplementary Table 2: Gram- positive AST results for neonates

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents									Resistance	
				Cloxacillin	Penicillin/ Ampicillin	Clindamycin	Vancomycin	Linezolid	Cotrimoxazole	Rifampicin	Gentamicin high	Ciprofloxacin	% MRSA	% VRE
1	<i>Streptococcus agalactiae</i>	21	Total no. isolates with sensitivities	_	20	_	19	19	_	_	_	_	-	-
			No. of susceptible isolates	_	20	_	19	18	_	_	_	_		
			% Susceptible Isolates	_	100%	_	100%	95%	_	_	_	_		
2	<i>Staphylococcus aureus</i>	16	Total no. isolates with sensitivities	16	_	15	16	15	15	16	_	15	6%	-
			No. of susceptible isolates	15	_	13	16	15	8	16	_	14		
			% Susceptible Isolates	94%	_	87%	100%	100%	53%	100%	_	93%		
3	<i>Enterococcus spp.</i>	10	Total no. isolates with sensitivities	_	10	_	10	9	_	_	10	_	-	0%
			No. of susceptible isolates	_	9	_	10	9	_	_	7	_		
			% Susceptible Isolates	_	90%	_	100%	100%	_	_	70%	_		
4	<i>Streptococcus pneumoniae</i>	2	Total no. isolates with sensitivities	_	1	_	2	2	_	_	_	_	-	-
			No. of susceptible isolates	_	1	_	2	2	_	_	_	_		
			% Susceptible Isolates	_	100%	_	100%	100%	_	_	_	_		

AST= antimicrobial susceptibility testing; spp.= species; No.= number; MRSA= methicillin resistant *Staphylococcus aureus*; VRE= vancomycin resistant *Enterococcus*

Supplementary Table 3: Gram-negative AST results for infants

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents												% Resistance					
				Beta Lactams									Ciprofloxacin	Aminoglycosides		Cotrimoxazole	% ESBL	% CRE	% MDR	% XDR	
				Ampicillin	Augmentin	Pip-taz	Ceftaxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem		Getamycin	Amikacin						
1	<i>Escherichia coli</i>	19	Total no. isolates with sensitivities	18	19	19	19	19	18	17	17	18	15	17	19	19	11%	0%	-	-	
			No. of susceptible isolates	4	15	19	17	18	18	17	17	18	14	15	19	7					
			% Susceptible Isolates	22%	79%	100%	89%	95%	100%	100%	100%	100%	93%	88%	100%	37%					
2	<i>Haemophilus influenzae</i>	8	Total no. isolates with sensitivities	8	0	0	4	-	0	0	7	-	3	-	-	7	-	-	-	-	
			No. of susceptible isolates	5	-	-	4	-	-	-	7	-	3	-	-	4					
			% Susceptible Isolates	63%	-	-	100%	-	-	-	100%	-	100%	-	-	57%					
3	<i>Klebsiella spp.</i>	7	Total no. isolates with sensitivities	-	7	7	7	6	7	7	7	7	7	6	7	43%	0%	-	-		
			No. of susceptible isolates	-	4	4	4	4	4	7	7	7	6	4	6					3	
			% Susceptible Isolates	-	57%	57%	57%	67%	57%	100%	100%	100%	86%	57%	100%					43%	
4	<i>Acinetobacter spp.</i>	3	Total no. isolates with sensitivities	-	-	3	-	3	3	-	3	2	3	2	2	3	-	-	0%	0%	
			No. of susceptible isolates	-	-	3	-	3	3	-	3	2	3	2	2	3					
			% Susceptible Isolates	-	-	100%	-	100%	100%	-	100%	100%	100%	100%	100%	100%					
5	<i>Pantoea spp.</i>	2	Total no. isolates with sensitivities	2	1	1	2	0	1	1	0	1	1	1	0	0	0%	0%	-	-	
			No. of susceptible isolates	0	1	1	2	-	1	1	-	1	1	1	-	-					
			% Susceptible Isolates	0%	100%	100%	100%	-	100%	100%	-	100%	100%	100%	-	-					
6	<i>Salmonella spp.</i>	1	Total no. isolates with sensitivities	1	-	-	1	1	-	1	-	-	1	-	-	1	0%	0%	-	-	
			No. of susceptible isolates	1	-	-	1	1	-	1	-	-	1	-	-	1					
			% Susceptible Isolates	33%	-	-	100%	100%	-	100%	-	-	100%	-	-	100%					
7	<i>Campylobacter jejuni</i>	1	Total no. isolates with sensitivities	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
			No. of susceptible isolates	-	-	-	-	-	-	-	-	-	-	1	-	-					-
			% Susceptible Isolates	-	-	-	-	-	-	-	-	-	-	100%	-	-					-

AST=antimicrobial susceptibility testing; spp.= species; No.= number; Pip-taz= piperacillin-tazobactam; ESBL= extended spectrum beta lactamase; CRE= carbapenem

resistant Enterobacterales; MDR= multidrug resistant; XDR= extensively drug resistant

Supplementary Table 4: Gram-positive AST results for infants

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents										Resistance	
				Cloxacillin	Penicillin/ Ampicillin	Clindamycin	Vancomycin	Linezolid	Cotrimoxazole	Rifampicin	Gentamicin high	Ciprofloxacin	Ceftriaxone	% MRSA	% VRE
1	<i>Streptococcus pneumoniae</i>	19	Total no. isolates with sensitivities	_	1	_	19	18	_	_	_	_	2	_	_
			No. of susceptible isolates	_	1	_	19	18	_	_	_	_	2		
			% Susceptible Isolates	_	100%	_	100%	100%	_	_	_	_	100%		
2	<i>Staphylococcus aureus</i>	17	Total no. isolates with sensitivities	17	_	17	17	16	16	17	_	16	_	0%	_
			No. of susceptible isolates	17	_	16	17	16	9	17	_	13	_		
			% Susceptible Isolates	100%	_	94%	100%	100%	56%	100%	_	81%	_		
3	<i>Enterococcus faecalis</i>	9	Total no. isolates with sensitivities	_	9	_	9	9	_	_	8	_	_	_	0%
			No. of susceptible isolates	_	9	_	9	9	_	_	5	_	_		
			% Susceptible Isolates	_	100%	_	100%	100%	_	_	63%	_	_		
4	<i>Streptococcus agalactiae</i>	8	Total no. isolates with sensitivities	_	6	_	8	8	_	_	_	_	_	_	_
			No. of susceptible isolates	_	6	_	8	8	_	_	_	_	_		
			% Susceptible Isolates	_	100%	_	100%	100%	_	_	_	_	_		
5	Other Streptococci (<i>S.pyogenes</i> , <i>S. anginosus</i>)	3	Total no. isolates with sensitivities	_	2	_	3	3	_	_	_	_	3	_	_
			No. of susceptible isolates	_	2	_	3	3	_	_	_	_	3		
			% Susceptible Isolates	_	100%	_	100%	100%	_	_	_	_	100%		

AST= antimicrobial susceptibility testing; spp.= species; No.= number; MRSA= methicillin resistant *Staphylococcus aureus*; VRE= vancomycinresistant *Enterococcus*

Supplementary Table 5: Gram-negative AST results for older children

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents											% Resistance					
				Beta Lactams									Ciprofloxacin	Aminoglycosides		Cotrimoxazole	% ESBL	% CRE	% MDR	% XDR
				Ampicillin	Augmentin	Pip-taz	Ceftioxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem		Getamycin	Amikacin					
1	<i>Escherichia coli</i>	5	Total no. isolates with sensitivities	5	5	5	5	5	5	5	5	5	5	5	0%	0%	-	-		
			No. of susceptible isolates	0	4	4	5	5	5	5	5	5	4	5					5	0
			% Susceptible Isolates	0%	80%	80%	100%	100%	100%	100%	100%	100%	80%	100%					100%	0%
2	<i>Haemophilus influenzae</i>	5	Total no. isolates with sensitivities	4	0	0	2	-)	0	5	-	0	-	-	4	-	-	-	-
			No. of susceptible isolates	2	-	-	2	-	-	-	5	-	-	-	-	1				
			% Susceptible Isolates	50%	-	-	100%	-	-	-	100%	-	-	-	-	25%				
3	<i>Klebsiella spp.</i>	2	Total no. isolates with sensitivities	-	2	2	2	2	2	1	2	2	2	2	2	50%	50%	-	-	
			No. of susceptible isolates	-	0	0	0	0	0	1	1	1	2	0	1					0
			% Susceptible Isolates	-	0%	0%	0%	0%	0%	100%*	50%	50%	100%	0%	50%					0%
4	<i>Acinetobacter spp.</i>	2	Total no. isolates with sensitivities	-	-	1	-	2	2	-	2	2	1	2	2	-	-	0%	0%	
			No. of susceptible isolates	-	-	1	-	1	1	-	2	2	1	2	2					2
			% Susceptible Isolates	-	-	100%	-	50%	50%	-	100%	100%	100%	100%	100%					100%
5	<i>Pseudomonas aeruginosa</i>	2	Total no. isolates with sensitivities	-	-	2	-	2	2	-	2	2	2	2	-	-	-	0%	0%	
			No. of susceptible isolates	-	-	2	-	2	2	-	2	2	2	2	2					-
			% Susceptible Isolates	-	-	100%	-	100%	100%	-	100%	100%	100%	100%	100%					-
6	<i>Salmonella spp. and S. typhi</i>	7	Total no. isolates with sensitivities	7	-	-	6	3	-	7	-	-	7	-	6	0%	0%	-	-	
			No. of susceptible isolates	3	-	-	6	3	-	7	-	-	4	-	3					
			% Susceptible Isolates	43%	-	-	100%	100%	-	100%	-	-	57%	-	50%					

*fewer susceptibility results were available for ertapenem, hence the lowest susceptibility result for a carbapenem was used to determine the CRE rate.

AST=antimicrobial susceptibility testing; spp.= species; No.= number; Pip-taz= piperacillin-tazobactam; ESBL= extended spectrum beta lactamase; CRE= carbapenem

resistant Enterobacterales; MDR= multidrug resistant; XDR= extensively drug resistant

Supplementary Table 6: Gram- positive AST results for older children

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents										Resistance	
				Cloxacillin	Penicillin/ Ampicillin	Clindamycin	Vancomycin	Linezolid	Cotrimoxazole	Rifampicin	Gentamicin high	Ciprofloxacin	Ceftriaxone	% MRSA	% VRE
1	<i>Staphylococcus aureus</i>	35	Total no. isolates with sensitivities	33	_	33	34	35	35	35	_	34	_	9,0%	_
			No. of susceptible isolates	30	_	29	34	35	14	33	_	30	_		
			% Susceptible Isolates	91%	_	88%	100%	100%	40%	94%	_	88%	_		
2	<i>Streptococcus pneumoniae</i>	17	Total no. isolates with sensitivities	_	5	_	17	16	_	_	_	_	4	_	_
			No. of susceptible isolates	_	4	_	17	16	_	_	_	_	4		
			% Susceptible Isolates	_	80%	_	100%	100%	_	_	_	_	100%		
3	<i>Enterococcus spp.</i>	5	Total no. isolates with sensitivities	_	4	_	4	4	_	_	4	_	_	_	0%
			No. of susceptible isolates	_	1	_	4	4	_	_	2	_	_		
			% Susceptible Isolates	_	25%	_	100%	100%	_	_	50%	_	_		
4	<i>Other Streptococci (S.pyogenes, S. anginosus)</i>	3	Total no. isolates with sensitivities	_	2	_	3	3	_	_	_	_	_	_	_
			No. of susceptible isolates	_	2	_	3	3	_	_	_	_	_		
			% Susceptible Isolates	_	100%	_	100%	100%	_	_	_	_	_		

AST= antimicrobial susceptibility testing; spp.= species; No.= number; MRSA= methicillin resistant *Staphylococcus aureus*; VRE=

vancomycin resistant *Enterococcus*

Supplementary Table 7: Gram- negative AST results for adults

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents												% Resistance					
				Beta Lactams										Ciprofloxacin	Aminoglycosides		Cotrimoxazole	% ESBL	% CRE	% MDR	% XDR
				Ampicillin	Augmentin	Pip-taz	Ceftiaxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem	Getamycin		Amikacin						
1	<i>Escherichia coli</i>	223	Total no. isolates with sensitivities	211	209	218	220	214	221	223	219	221	183	214	210	221	18%	1%	-	-	
			No. of susceptible isolates	41	136	198	178	184	197	221	218	219	141	179	206	66					
			% Susceptible Isolates	19%	65%	91%	81%	86%	89%	99%	99%	99%	77%	84%	98%	30%					
2	<i>Klebsiella spp.</i>	80	Total no. isolates with sensitivities	-	76	79	78	75	80	73	81	79	59	74	75	80	28%	10%	-	-	
			No. of susceptible isolates	-	44	61	49	46	50	70	73	71	41	52	75	47					
			% Susceptible Isolates	-	58%	77%	63%	61%	63%	96%*	90%	90%	69%	70%	100%	59%					
3	<i>Salmonella spp.</i>	74	Total no. isolates with sensitivities	69	-	-	72	63	-	71	-	-	69	-	-	73	2%	0%	-	-	
			No. of susceptible isolates	58	-	-	71	62	-	71	-	-	58	-	-	61					
			% Susceptible Isolates	84%	-	-	99%	98%	-	100%	-	-	84%	-	-	84%					
4	<i>Pseudomonas spp.</i>	19	Total no. isolates with sensitivities	-	-	18	-	19	18	-	19	19	18	18	19	-	-	-	0%	5%	
			No. of susceptible isolates	-	-	16	-	16	16	-	17	17	17	17	18	-					
			% Susceptible Isolates	-	-	89%	-	84%	89%	-	90%	90%	94%	94%	95%	-					
5	<i>Enterobacter spp.</i>	12	Total no. isolates with sensitivities	-	-	10	12	9	12	9	12	12	8	12	11	11	8%	8%	-	-	
			No. of susceptible isolates	-	-	8	10	8	11	9	11	11	7	11	11	8					
			% Susceptible Isolates	-	-	80%	83%	89%	92%	100%*	92%	92%	88%	92%	100%	73%					
6	<i>Acinetobacter spp.</i>	10	Total no. isolates with sensitivities	-	-	10	-	9	8	-	10	9	7	9	6	5	-	-	10%	20%	
			No. of susceptible isolates	-	-	7	-	6	5	-	7	7	5	7	6	5					
			% Susceptible Isolates	-	-	70%	-	67%	63%	-	70%	78%	71%	78%	100%	100%					

* fewer susceptibility results were available for ertapenem, hence the lowest susceptibility result for a carbapenem was used to determine the CRE rate.

AST=antimicrobial susceptibility testing; spp.= species; No.= number; Pip-taz= piperacillin-tazobactam; ESBL= extended spectrum beta lactamase; CRE= carbapenem

resistant Enterobacterales; MDR= multidrug resistant; XDR= extensively drug resistant

Supplementary Table 2 continued: Gram- negative AST results for adults

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents											% Resistance						
				Beta Lactams									Ciprofloxacin	Aminoglycosides		Cotrimoxazole	% ESBL	% CRE	% MDR	% XDR	
				Ampicillin	Augmentin	Pip-taz	Ceftioxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem		Getamycin	Amikacin						
7	<i>Proteus spp.</i>	12	Total no. isolates with sensitivities	11	10	12	12	11	12	12	12	4	10	12	12	12	0%	0%	-	-	
			No. of susceptible isolates	5	9	11	12	11	12	12	12	12	4	10	12	12					5
			% Susceptible Isolates	45%	90%	92%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%					42%
8	<i>Haemophilus spp.</i>	7	Total no. isolates with sensitivities	7	0	0	5	-	0	0	5	-	0	-	-	4	-	-	-	-	
			No. of susceptible isolates	5	-	-	5	-	-	-	5	-	-	-	-	3					
			% Susceptible Isolates	71%	-	-	100%	-	-	-	100%	-	-	-	-	75%					
9	<i>Salmonella typhi</i> and <i>S. paratyphi</i>	4	Total no. isolates with sensitivities	4	-	-	4	4	-	4	-	-	3	-	-	4	0%	0%	-	-	
			No. of susceptible isolates	2	-	-	4	4	-	4	-	-	2	-	-	2					
			% Susceptible Isolates	50%	-	-	100%	100%	-	100%	-	-	67%	-	-	50%					
10	<i>Morganella spp.</i>	4	Total no. isolates with sensitivities	4	3	4	4	4	4	4	4	3	4	4	4	4	0%	0%	-	-	
			No. of susceptible isolates	0	0	4	4	4	4	4	4	4	3	2	2	4					2
			% Susceptible Isolates	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	50%	50%	100%					50%
11	<i>Serratia marcescens</i>	4	Total no. isolates with sensitivities	-	4	0	3	3	4	4	4	0	3	3	3	4	0%	0%	-	-	
			No. of susceptible isolates	-	0	-	3	3	4	4	4	4	-	3	3	3					4
			% Susceptible Isolates	-	0%	-	100%	100%	100%	100%	100%	100%	-	100%	100%	100%					100%
12	<i>Other Enterobacteriales (Citrobacter spp., Providentia rettgeri, Plesiomonas shigelloides, Shigella sonnei)</i>	5	Total no. isolates with sensitivities	5	4	4	4	5	4	5	4	3	5	4	4	5	0%	0%	-	-	
			No. of susceptible isolates	1	2	4	4	5	4	5	4	4	3	5	3	3					5
			% Susceptible Isolates		50%	100%	100%	100%	100%	100%	100%	100%	100%	100%	75%	75%					100%

AST=antimicrobial susceptibility testing; spp.= species; No.= number; Pip-taz= piperacillin-tazobactam; ESBL= extended spectrum beta lactamase; CRE= carbapenem

resistant Enterobacteriales; MDR= multidrug resistant; XDR= extensively drug resistant

Supplementary Table 7 continued: Gram- negative AST results for adults

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents												% Resistance					
				Beta Lactams										Ciprofloxacin	Aminoglycosides		Cotrimoxazole	% ESBL	% CRE	% MDR	% XDR
				Ampicillin	Augmentin	Pip-taz	Ceftiaxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem	Getamycin		Amikacin						
13	<i>Aeromonas</i> spp.	1	Total no. isolates with sensitivities	-	1	0	1	1	1	0	0	1	1	1	1	1	-	-	-	-	
			No. of susceptible isolates	-	0	-	1	1	1	-	-	0	1	1	1	1	-	-	-	-	
			% Susceptible Isolates	-	0%	-	100%	100%	100%	-	-	0%	100%	100%	100%	100%	-	-	-	-	
14	<i>Burkholderia cepacia</i>	1	Total no. isolates with sensitivities	-	-	-	-	1	-	-	1	-	-	-	1	-	-	-	-		
			No. of susceptible isolates	-	-	-	-	1	-	-	1	-	-	-	-	0	-	-	-	-	
			% Susceptible Isolates	-	-	-	-	100%	-	-	100%	-	-	-	-	0%	-	-	-	-	
15	<i>Stenotrophomonas maltophilia</i>	1	Total no. isolates with sensitivities	-	-	-	-	1	-	-	-	-	1	-	-	1	-	-	-		
			No. of susceptible isolates	-	-	-	-	1	-	-	-	-	1	-	-	1	-	-	-	-	
			% Susceptible Isolates	-	-	-	-	100%	-	-	-	-	100%	-	-	100%	-	-	-	-	
16	<i>Alcaligenes</i> spp.	1	Total no. isolates with sensitivities	-	-	1	-	1	1	-	1	1	1	1	1	-	-	-	-		
			No. of susceptible isolates	-	-	0	-	0	0	-	0	0	0	0	0	0	-	-	0%	100%	
			% Susceptible Isolates	-	-	0%	-	0%	0%	-	0%	0%	0%	0%	0%	0%	-	-	-	-	

AST=antimicrobial susceptibility testing; spp.= species; No.= number; Pip-taz= piperacillin-tazobactam; ESBL= extended spectrum beta lactamase; CRE= carbapenem

resistant Enterobacterales; MDR= multidrug resistant; XDR= extensively drug resistant

Supplementary Table 8: Gram- positive AST results for adults

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents									Resistance		
				Cloxacillin	Penicillin/ Ampicillin	Clindamycin	Vancomycin	Linezolid	Cotrimoxazole	Rifampicin	Gentamicin high	Ciprofloxacin	Ceftriaxone	% MRSA	% VRE
1	<i>Streptococcus pneumoniae</i>	175	Total no. isolates with sensitivities	–	43	–	171	159	–	–	–	–	34	–	–
			No. of susceptible isolates	–	42	–	171	158	–	–	–	–	34		
			% Susceptible Isolates	–	98%	–	100%	99%	–	–	–	–	100%		
2	<i>Staphylococcus aureus</i>	152	Total no. isolates with sensitivities	148	–	150	150	146	151	148	–	145	–	7%	–
			No. of susceptible isolates	137	–	133	149	145	94	142	–	131	–		
			% Susceptible Isolates	93%	–	89%	99%	99%	62%	96%	–	90%	–		
3	<i>Enterococcus spp.</i>	25	Total no. isolates with sensitivities	–	24	–	23	25	–	–	20	–	–	–	0%
			No. of susceptible isolates	–	20	–	23	25	–	–	14	–	–		
			% Susceptible Isolates	–	83%	–	100%	100%	–	–	70%	–	–		
4	<i>Streptococcus anginosus</i>	22	Total no. isolates with sensitivities	–	21	–	22	20	–	–	–	–	16	–	–
			No. of susceptible isolates	–	21	–	22	20	–	–	–	–	16		
			% Susceptible Isolates	–	100%	–	100%	100%	–	–	–	–	100%		
5	<i>S.pyogenes</i>	18	Total no. isolates with sensitivities	–	17	–	17	18	–	–	–	–	16	–	–
			No. of susceptible isolates	–	17	–	17	18	–	–	–	–	16		
			% Susceptible Isolates	–	100%	–	100%	100%	–	–	–	–	100%		
6	<i>S.agalactiae</i>	12	Total no. isolates with sensitivities	–	12	–	11	11	–	–	–	–	3	–	–
			No. of susceptible isolates	–	12	–	11	11	–	–	–	–	3		
			% Susceptible Isolates	–	100%	–	100%	100%	–	–	–	–	100%		
7	<i>Other Streptococci (S. dysgalactiae, S.gallolyticus, Gemella spp., Veilonella spp.</i>	9	Total no. isolates with sensitivities	–	9	–	8	8	–	–	–	–	8	–	–
			No. of susceptible isolates	–	9	–	8	8	–	–	–	–	8		
			% Susceptible Isolates	–	100%	–	100%	100%	–	–	–	–	100%		
8	<i>S. lugdunensis</i>	1	Total no. isolates with sensitivities	1	–	1	1	1	1	1	–	1	–	–	–
			No. of susceptible isolates	1	–	0	1	1	1	1	–	1	–		
			% Susceptible Isolates	100%	–	0%	100%	100%	100%	100%	–	100%	–		

AST= antimicrobial susceptibility testing; spp.= species; No.= number; MRSA= methicillin resistant *Staphylococcus aureus*; VRE= vancomycin resistant *Enterococcus*

Supplementary Table 9: Gram- negative AST results for the elderly

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents												% Resistance					
				Beta Lactams									Ciprofloxacin	Aminoglycosides		Coltrimoxazole	% ESBL	% CRE	% MDR	% XDR	
				Ampicillin	Augmentin	Pip-taz	Ceftioxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem		Getamycin	Amikacin						
1	<i>Escherichia coli</i>	61	Total no. isolates with sensitivities	55	59	61	58	53	61	59	59	57	50	58	57	61	15%	2%	-	-	
			No. of susceptible isolates	11	39	52	49	48	56	59	58	56	36	51	55	21					
			% Susceptible Isolates	20%	66%	85%	84%	91%	92%	100%*	98%	98%	72%	88%	96%	34%					
2.	<i>Klebsiella spp.</i>	28	Total no. isolates with sensitivities	-	28	27	26	28	28	27	28	28	24	26	27	27	46%	18%	-	-	
			No. of susceptible isolates	-	16	19	14	16	17	23	23	23	16	16	27	13					
			% Susceptible Isolates	-	57%	70%	54%	57%	61%	85%*	82%	82%	67%	62%	100%	48%					
3	<i>Enterobacter spp.</i>	13	Total no. isolates with sensitivities	-	-	11	13	13	11	11	13	12	11	12	13	13	31%	0%	-	-	
			No. of susceptible isolates	-	-	9	9	9	9	11	13	12	9	9	12	9					
			% Susceptible Isolates	-	-	82%	69%	69%	82%	100%	100%	100%	82%	75%	92%	69%					
4	<i>Proteus spp.</i>	10	Total no. isolates with sensitivities	10	10	9	10	10	9	9	9	2	8	10	10	10	0%	0%	-	-	
			No. of susceptible isolates	4	6	8	10	10	9	9	9	9	2	7	10	9					8
			% Susceptible Isolates	40%	60%	89%	100%	100%	100%	100%	100%	100%	100%	88%	100%	90%					80%
5	<i>Salmonella spp.</i>	9	Total no. isolates with sensitivities	9	-	-	9	9	-	9	-	-	8	-	-	9	0%	0%	-	-	
			No. of susceptible isolates	8	-	-	9	9	-	9	-	-	7	-	-	8					
			% Susceptible Isolates	89%	-	-	100%	100%	-	100%	-	-	88%	-	-	89%					
6	<i>Pseudomonas spp.</i>	8	Total no. isolates with sensitivities	-	-	7	-	8	8	-	8	8	7	8	8	-	-	-	0%	25%	
			No. of susceptible isolates	-	-	6	-	5	6	-	6	6	5	5	5	-					
			% Susceptible Isolates	-	-	85%	-	63%	75%	-	75%	75%	71%	63%	63%	-					

*fewer susceptibility results were available for ertapenem, hence the lowest susceptibility result for a carbapenem was used to determine the CRE rate.

AST=antimicrobial susceptibility testing; spp.= species; No.= number; Pip-taz= piperacillin-tazobactam; ESBL= extended spectrum beta lactamase; CRE= carbapenem

resistant Enterobacterales; MDR= multidrug resistant; XDR= extensively drug resistant

Supplementary Table 9 continued : Gram- negative AST results for the elderly

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents												% Resistance					
				Beta Lactams									Ciprofloxacin	Aminoglycosides		Cotrimoxazole	% ESBL	% CRE	% MDR	% XDR	
				Ampicillin	Augmentin	Pip-taz	Ceftioxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem		Getamycin	Amikacin						
7	<i>Haemophilus influenzae</i>	3	Total no. isolates with sensitivities	3	0	0	3	_	0	_	3	_	0	_	_	3	-	-	-	-	
			No. of susceptible isolates	1	_	_	2	_	_	_	3	_	_	_	_	2					
			% Susceptible Isolates	33%	_	_	67%	_	_	_	100%	_	_	_	_	67%					
8	<i>Acinetobacter</i> spp.	2	Total no. isolates with sensitivities	_	_	2	_	2	2	_	2	2	1	1	2	1	-	-	0%	0%	
			No. of susceptible isolates	_	_	1	_	0	0	_	1	1	1	1	2	0					
			% Susceptible Isolates	_	_	50%	_	0%	0%	_	50%	50%	100%	100%	100%	0%					
9	<i>Other Enterobacteriales (Serratia spp., Morganella spp.)</i>	3	Total no. isolates with sensitivities	_	_	3	3	3	3	3	3	2	2	3	3	3	0%	0%	-	-	
			No. of susceptible isolates	_	_	3	3	3	3	3	3	3	2	2	2	3					2
			% Susceptible Isolates	_	_	100%	100%	100%	100%	100%	100%	100%	100%	100%	67%	100%					67%
10	<i>Aeromonas</i> spp.	1	Total no. isolates with sensitivities	_	1	1	1	1	1	0	0	1	0	1	1	1	-	-	-	-	
			No. of susceptible isolates	_	1	1	1	1	1	_	_	1	_	1	1	1					
			% Susceptible Isolates	_	100%	100%	100%	100%	100%	_	_	100%	_	100%	100%	100%					
11	<i>Burkholderia cepacia</i>	1	Total no. isolates with sensitivities	_	_	_	_	1	_	_	1	_	_	_	_	1	-	-	-	-	
			No. of susceptible isolates	_	_	_	_	1	_	_	1	_	_	_	_	1					
			% Susceptible Isolates	_	_	_	_	100%	_	_	100%	_	_	_	_	100%					

AST=antimicrobial susceptibility testing; spp.= species; No.= number; Pip-taz= piperacillin-tazobactam; ESBL= extended spectrum beta lactamase; CRE= carbapenem

resistant Enterobacteriales; MDR= multidrug resistant; XDR= extensively drug resistant

Supplementary Table 10: Gram- positive AST results for the elderly

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents									Resistance		
				Cloxacillin	Penicillin/ Ampicillin	Clindamycin	Vancomycin	Linezolid	Cotrimoxazole	Rifampicin	Gentamicin high	Ciprofloxacin	Ceftriaxone	% MRSA	% VRE
1	<i>Staphylococcus aureus</i>	26	Total no. isolates with sensitivities	26	–	26	26	25	25	26	–	24	–	15%	–
			No. of susceptible isolates	22	–	22	26	25	14	24	–	19	–		
			% Susceptible Isolates	85%	–	85%	100%	100%	56%	92%	–	79%	–		
2	<i>Streptococcus pneumoniae</i>	12	Total no. isolates with sensitivities	–	4	–	11	10	–	–	–	–	3	–	–
			No. of susceptible isolates	–	4	–	11	10	–	–	–	–	3		
			% Susceptible Isolates	–	100%	–	100%	100%	–	–	–	–	100%		
3	<i>Enterococcus spp.</i>	8	Total no. isolates with sensitivities	–	7	–	8	7	–	–	6	–	–	–	0%
			No. of susceptible isolates	–	5	–	8	7	–	–	4	–	–		
			% Susceptible Isolates	–	71%	–	100%	100%	–	–	67%	–	–		
4	<i>Streptococcus pyogenes</i>	4	Total no. isolates with sensitivities	–	4	–	3	4	–	–	–	–	3	–	–
			No. of susceptible isolates	–	4	–	3	4	–	–	–	–	3		
			% Susceptible Isolates	–	100%	–	100%	100%	–	–	–	–	100%		
5	<i>Streptococcus anginosus</i>	4	Total no. isolates with sensitivities	–	4	–	3	3	–	–	–	–	3	–	–
			No. of susceptible isolates	–	4	–	3	3	–	–	–	–	3		
			% Susceptible Isolates	–	100%	–	100%	100%	–	–	–	–	100%		
6	<i>Streptococcus agalactiae</i>	3	Total no. isolates with sensitivities	–	3	–	2	3	–	–	–	–	2	–	–
			No. of susceptible isolates	–	3	–	2	3	–	–	–	–	2		
			% Susceptible Isolates	–	100%	–	100%	100%	–	–	–	–	100%		
7	<i>Staphylococcus lugdunensis</i>	1	Total no. isolates with sensitivities	–	1	–	1	1	–	–	–	–	–	–	–
			No. of susceptible isolates	–	0	–	1	1	–	–	–	–	–		
			% Susceptible Isolates	–	0%	–	100%	100%	–	–	–	–	–		
8	Other Streptococci (<i>S. dysgalactiae</i> , <i>Leuconostoc spp.</i>)	2	Total no. isolates with sensitivities	–	1	–	2	2	–	–	–	–	2	–	–
			No. of susceptible isolates	–	1	–	1	2	–	–	–	–	2		
			% Susceptible Isolates	–	100%	–	50%	100%	–	–	–	–	100%		

AST= antimicrobial susceptibility testing; spp.= species; No.= number; MRSA= methicillin resistant *Staphylococcus aureus*; VRE= vancomycin resistant *Enterococcus*

Supplementary Table 11: Gram- negative AST results for surgical ED

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents													% Resistance				
				Beta Lactams										Ciprofloxacin	Aminoglycosides		Cotrimoxazole	% ESBL	% CRE	% MDR	% XDR
				Ampicillin	Augmentin	Pip-taz	Ceftioxone	Ceftazidime	Cefepime	Ertapenem	Meropenem	Imipenem	Netilmicin		Amikacin						
1	<i>Klebsiella pneumoniae</i>	7	Total no. isolates with sensitivities	–	6	7	7	7	7	5	7	7	5	6	6	7	29%	0%	–	–	
			No. of susceptible isolates	–	3	7	5	5	5	5	7	7	5	4	6	4					
			% Susceptible Isolates	–	50%	100%	71%	71%	71%	100%	100%	100%	100%	67%	100%	57%					
2	<i>Acinetobacter spp.</i>	7	Total no. isolates with sensitivities	–	–	7	–	6	5	–	6	6	5	7	5	7	–	–	57%	14%	
			No. of susceptible isolates	–	–	2	–	2	2	–	2	2	5	7	4	2					
			% Susceptible Isolates	–	–	29%	–	33%	40%	–	33%	33%	100%	100%	80%	29%					
3	<i>Escherichia coli</i>	3	Total no. isolates with sensitivities	3	3	3	3	3	3	3	3	3	3	3	3	3	33%	0%	–	–	
			No. of susceptible isolates	1	2	2	2	3	3	3	3	3	2	2	3	1					
			% Susceptible Isolates	33%	67%	67%	67%	100%	100%	100%	100%	100%	67%	67%	100%	33%					
4	<i>Proteus spp.</i>	3	Total no. isolates with sensitivities	3	3	3	2	3	3	2	3	0	2	3	3	3	33%	0%	–	–	
			No. of susceptible isolates	1	3	3	2	2	2	2	3	–	1	2	2	2					
			% Susceptible Isolates	33%	100%	100%	100%	67%	67%	100%	100%	–	50%	67%	67%	67%					
5	<i>Salmonella spp.</i>	2	Total no. isolates with sensitivities	2	–	–	1	0	–	2	–	–	2	–	–	2	0%	0%	–	–	
			No. of susceptible isolates	2	–	–	1	–	–	2	–	–	2	–	–	2					
			% Susceptible Isolates	100%	–	–	100%	–	–	100%	–	–	100%	–	–	100%					
6	<i>Serratia spp.</i>	2	Total no. isolates with sensitivities	–	2	1	1	1	1	1	2	1	1	1	1	1	0%	50%	–	–	
			No. of susceptible isolates	–	0	1	1	0	1	0	1	1	1	1	1	0					
			% Susceptible Isolates	–	0%	100%	100%	0%	100%	0%*	50%	100%	100%	100%	100%	0%					
7	<i>Enterobacter spp.</i>	1	Total no. isolates with sensitivities	–	–	1	1	1	0	1	1	1	1	1	1	1	0%	0%	–	–	
			No. of susceptible isolates	–	–	1	1	1	–	1	1	1	1	1	1	1					
			% Susceptible Isolates	–	–	100%	100%	100%	–	100%	100%	100%	100%	100%	100%	100%					
8	<i>Haemophilus spp.</i>	1	Total no. isolates with sensitivities	1	0	0	0	–	0	0	1	–	1	–	–	1	–	–	–	–	
			No. of susceptible isolates	1	–	–	–	–	–	–	1	–	1	–	–	1					
			% Susceptible Isolates	100%	–	–	–	–	–	–	100%	–	100%	–	–	100%					

*fewer susceptibility results were available for ertapenem, hence susceptibility to meropenem was used to determine the CRE rate.

Supplementary Table 12: Gram- positive AST results for surgical ED

Serial number	Organisms	Number of isolates (duplicates removed)	Breakdown of each isolate	% Susceptibility to Routinely Tested Antimicrobial Agents										Resistance		
				Cloxacillin	Penicillin/ Ampicillin	Erythromycin	Clindamycin	Vancomycin	Linezolid	Cotrimoxazole	Rifampicin	Gentamicin	Gentamicin high	Ciprofloxacin	% MRSA	% VRE
1	<i>Staphylococcus aureus</i>	8	Total no. isolates with sensitivities	8	–	7	7	8	8	8	8	8	6	6	–	–
			No. of susceptible isolates	8	–	7	7	8	8	4	8	8	6	6		
			% Susceptible Isolates	100%		100%	100%	100%	100%	50%	100%	100%	100%	100%		
2	<i>Streptococcus pneumoniae</i>	6	Total no. isolates with sensitivities	–	3	–	–	6	5	–	–	–	–	–	–	–
			No. of susceptible isolates	–	3	–	–	6	5	–	–	–	–	–		
			% Susceptible Isolates	–	100%	–	–	100%	100%	–	–	–	–	–		
3	<i>Enterococcus faecalis</i>	2	Total no. isolates with sensitivities	–	2	–	–	2	2	–	–	–	–	–	0%	0%
			No. of susceptible isolates	–	2	–	–	2	2	–	–	–	–	–		
			% Susceptible Isolates	–	100%	–	–	100%	100%	–	–	–	–	–		
4	<i>Enterococcus faecium</i>	1	Total no. isolates with sensitivities	–	1	–	–	1	1	–	–	–	–	–	0%	0%
			No. of susceptible isolates	–	0	–	–	1	1	–	–	–	–	–		
			% Susceptible Isolates	–	0,0%	–	–	100%	100%	–	–	–	–	–		
5	<i>Enterococcus spp.</i>	1	Total no. isolates with sensitivities	–	1	–	–	1	1	–	–	–	–	–	0%	0%
			No. of susceptible isolates	–	1	–	–	1	1	–	–	–	–	–		
			% Susceptible Isolates	–	100%	–	–	100%	100%	–	–	–	–	–		

AST= antimicrobial susceptibility testing; spp.= species; No.= number; MRSA= methicillin resistant *Staphylococcus aureus*; VRE= vancomycin

resistant *Enterococcus*

Supplementary Table 13: *Candida* species AST results from paediatric ED

Neonates						
Serial number	Organisms	Number of isolates (duplicates removed)	% of total <i>Candida</i> spp.	Breakdown of each isolate	% Susceptibility to Routinely Tested Azoles	
					Fluconazole	Voriconazole
1	<i>Candida parapsilosis</i>	1	100%	Total no. isolates with sensitivities	1	0
				No. of susceptible isolates	0	–
				% Susceptible Isolates	0%	–
Infants						
2	<i>Candida albicans</i>	1	50%	Total no. isolates with sensitivities	0	0
				No. of susceptible isolates	–	–
				% Susceptible Isolates	–	–
3	<i>Candida lusitanae</i>	1	50%	Total no. isolates with sensitivities	0	0
				No. of susceptible isolates	–	–
				% Susceptible Isolates	–	–
Older Children						
4	<i>Candida albicans</i>	1	100%	Total no. isolates with sensitivities	1	1
				No. of susceptible isolates	1	1
				% Susceptible Isolates	100%	100%

Supplementary Table 14: *Candida* species AST results for adults and elderly

Adults						
Serial number	Organisms	Number of isolates (duplicates removed)	% of total <i>Candida</i> spp.	Breakdown of each isolate	% Susceptibility to Routinely Tested Azoles	
					Fluconazole	Voriconazole
1	<i>Candida albicans</i>	6	55%	Total no. isolates with sensitivities	5	6
				No. of susceptible isolates	5	6
				% Susceptible Isolates	100%	100%
2	<i>Candida parapsilosis</i>	2	18%	Total no. isolates with sensitivities	2	1
				No. of susceptible isolates	2	1
				% Susceptible Isolates	100%	100%
3	<i>Candida glabrata</i>	1	9%	Total no. isolates with sensitivities	0	0
				No. of susceptible isolates	NIL CLSI BREAKPOINTS	
				% Susceptible Isolates	–	–
4	<i>Candida tropicalis</i>	1	9%	Total no. isolates with sensitivities	1	1
				No. of susceptible isolates	1	1
				% Susceptible Isolates	100%	100%
5	<i>Candida</i> spp.	1	9%	Total no. isolates with sensitivities	0	0
				No. of susceptible isolates	–	–
				% Susceptible Isolates	–	–
Elderly						
6	<i>Candida albicans</i>	1	100%	Total no. isolates with sensitivities	1	1
				No. of susceptible isolates	1	1
				% Susceptible Isolates	100%	100%

Supplementary Table 15: *Candida* species AST results for surgical ED

Surgical ED						
Serial number	Organism	Number of isolates (duplicates removed)	%of total <i>Candida</i> spp.	Breakdown of each isolate	Fluconazole	Voriconazole
1	<i>Candida glabrata</i>	1	100%	Total no. isolates with sensitivities	1	1
				No. of susceptible isolates	No CLSI breakpoints	
				% Susceptible Isolates	–	–