

Supplementary Materials:

Supplementary Table S1: Total number of all bacteria isolates at MDS lancet laboratories Ghana from 2017 and 2021

BACTERIA GNB	MALES N(%)	SEX FEMALE N(%)	UNKNOWN N(%)	TOTAL N (%)
<i>Aeromonas hydrophila</i>	1 (0.02)	0 (0.00)	0 (0.00)	1 (0.00)
<i>Acinetobacter baumannii</i>	20 (0.35)	25 (0.17)	0 (0.00)	45 (0.22)
<i>Acinetobacter lwoffii</i>	1 (0.02)	2 (0.01)	0 (0.00)	3 (0.01)
<i>Citrobacter freundii</i>	99 (1.76)	91 (0.61)	1 (4.17)	191 (0.93)
<i>Citrobacter brakii</i>	4 (0.07)	7 (0.05)	0 (0.00)	11 (0.05)
<i>Citrobacter diversus</i>	8 (0.14)	26 (0.18)	0 (0.00)	34 (0.17)
<i>Citrobacter farmeri</i>	1 (0.02)	2 (0.01)	0 (0.00)	3 (0.01)
<i>Citroacter spp</i>	5 (0.09)	9 (0.06)	0 (0.00)	14 (0.07)
<i>citrobacter youngae</i>	12 (0.21)	18 (0.12)	0 (0.00)	30 (0.15)
<i>Escherichia coli</i>	3,552 (62.97)	11,129 (74.94)	14 (58.33)	14,695 (71.63)
<i>Escherichia vulneris</i>	1 (0.02)	0 (0.00)	0 (0.00)	1 (0.00)
<i>Enterobacter aerogenes</i>	52 (0.92)	141 (0.95)	0 (0.00)	193 (0.94)
<i>Enterobacter amnigenus 1</i>	2 (0.04)	6 (0.04)	0 (0.00)	8 (0.04)
<i>Enterobacter amnigenus 2</i>	0 (0.00)	4 (0.03)	0 (0.00)	4 (0.02)
<i>Enterobacter asburiae</i>	0 (0.00)	2 (0.01)	0 (0.00)	2 (0.01)
<i>Enterobacter cloacae</i>	286 (5.07)	261 (1.76)	0 (0.00)	547 (2.67)
<i>Enterobacter gergoviae</i>	4 (0.07)	8 (0.05)	0 (0.00)	12 (0.06)
<i>Enterobacter spp</i>	1 (0.02)	0 (0.00)	0 (0.00)	1 (0.00)
<i>hafnia alvei</i>	0 (0.00)	6 (0.04)	0 (0.00)	6 (0.03)
<i>Klebsiella oxytoca</i>	21 (0.37)	46 (0.31)	0 (0.00)	67 (0.33)
<i>klebsiella ozaenae</i>	5 (0.09)	7	0 (0.00)	12 (0.06)
<i>klebsiella pneumoniae</i>	1,090 (19.32)	1,933 (13.02)	5 (20.83)	3,028 (14.76)
<i>Klebsiella rhinoscleromatis</i>	1 (0.02)	0 (0.00)	0 (0.00)	1 (0.00)
<i>Klebsiella spp</i>	1 (0.02)	3 (0.02)	0 (0.00)	4 (0.02)
<i>Kluyvera ascorbata</i>	0 (0.00)	1 (0.01)	0 (0.00)	1 ((0.00)
<i>kluyvera spp</i>	15 (0.27%)	21 (0.14)	0 (0.00)	36 (0.18)
<i>Morganella morganii</i>	21 (0.37)	36 (0.24)	0 (0.00)	57 (0.28)
<i>Pantoea agglomerans</i>	1 (0.02)	2 (0.01)	0 (0.00)	3 (0.01)
<i>Pantoea spp</i>	14 (0.25)	26 (0.18)	0 (0.00)	40 (0.19)
<i>Proteus mirailis</i>	228 (4.04)	862 (5.8)	3 (12.50)	1,093 (5.33)

<i>Proteus penneri</i>	5 (0.09)	3 (0.02)	0 (0.00)	8 (0.4)
<i>Proteus vulgaris</i>	7 (0.12)	10 (0.07)	0 (0.00)	17 (0.08)
<i>Proteus spp</i>	0 (0.00)	2 (0.01)	0 (0.00)	2 (0.01)
<i>Providencia</i> <i>alcalifaciens</i>	0 (0.00)	1 (0.01)	0 (0.00)	1 (0.00)
<i>Providencia rettgeri</i>	22 (0.39)	0 (0.00)	0 (0.00)	22 (0.11)
<i>Providencia</i> <i>rustigianii</i>	1 (0.02)	2 (0.01)	0 (0.00)	3 (0.01)
<i>Providencia spp</i>	1 (0.02)	0 (0.00)	0 (0.00)	1 (0.00)
<i>Providencia stuartii</i>	8 (0.14)	5 (0.03)	0 (0.00)	13 (0.06)
<i>Pseudomonas</i> <i>aeruginosa</i>	53 (0.94)	36 (0.24)	1 (4.17)	90 (0.44)
<i>Pseudomonas</i> <i>fluorescens</i>	4 (0.07)	5 (0.03)	0 (0.00)	9 (0.04)
<i>Pseudomonas luteola</i>	0 (0.00)	1 (0.01)	0 (0.00)	1 (0.00)
<i>Raoultella</i> <i>ornithinolytica</i>	17 (0.30)	37 (0.25)	0 (0.00)	54 (0.26)
<i>Serratia ficaria</i>	9 (0.16)	12 (0.08)	0 (0.00)	21 (0.10)
<i>Serratia fonticola</i>	8 (0.14)	8 (0.05)	0 (0.00)	16 (0.08)
<i>Serratia liquefaciens</i>	13 (0.23)	13 (0.09)	0 (0.00)	26 (0.13)
<i>Serratia marcescens</i>	29 (0.51)	21 (0.14)	0 (0.00)	50 (0.24)
<i>Serratia odorifera</i>	8 (0.14)	12 (0.08)	0 (0.00)	20 (0.10)
<i>Serratia plymuthica</i>	5 (0.09)	7 (0.05)	0 (0.00)	12 (0.06)
<i>Serratia rubidaea</i>	3 (0.05)	0 (0.00)	0 (0.00)	3 (0.01)
<i>Stenotrophomonas</i> <i>maltophilia</i>	2 (0.04)	1 (0.01)	0 (0.00)	3 (0.01)
TOTAL N(%)	5,641 (100)	14,850 (100)	24 (100)	20,515 (100)
GPC				
<i>Enterococcus faecalis</i>	40 (90.91)	227 (90.44)	0 (0.00)	267 (90.51)
<i>Enterococcus</i> <i>faecium</i>	2 (4.55)	0 (0.00)	0 (0.00)	2 (0.68)
<i>Enterococcus spp</i>	0 (0.00)	1 (0.40)	0 (0.00)	1 (0.34)
<i>Staphylococcus</i> <i>aureus</i>	0 (0.00)	5 (1.99)	0 (0.00)	5 (1.69)
<i>Staphylococcus</i> <i>saprophyticus</i>	2 (4.55)	9 (3.59)	0 (0.00)	11 (3.73)
<i>Streptococcus group</i> <i>B</i>	0 (0.00)	9 (3.59)	0 (0.00)	9 (3.05)
TOTAL N(%)	44 (100)	251 (100)	0 (0.00)	295 (100)

¹GPC: Gram positive cocci

²GNB: gram negative bacilli

Supplementary Table S2: The susceptibility patterns of tested antibiotics against ESBL positive bacteria at the MDS-lancet laboratories Ghana from 2017 to 2021

Antibiotic	ESBL+			Total
	S	R	N/A	
Amikacin	9,273 (94.61)	522 (5.33)	6 (0.06)	9,801
Ciprofloxacin	1,340 (13.67)	8,425 (85.96)	36 (0.37)	9,801
Cotrimoxazole	862 (8.80)	8,791 (89.69)	148 (1.51)	9,801
Ertapenem	9,591 (97.86)	203 (2.07)	7 (0.07)	9,801
Fosfomycin	8,937 (91.18)	529 (5.40)	335 (3.42)	9,801
Gentamycin	4,108 (41.91)	5,693 (58.09)	0 (0.00)	9,801
Imipenem	9,565 (97.59)	113 (1.15)	123 (1.25)	9,801
Meropenem	9,601 (97.96)	124 (1.27)	76 (0.78)	9,801
Nitrofurantoin	5,648 (57.63)	4,077 (41.60)	76 (0.78)	9,801
Tegicyclin	7,803 (79.61)	462 (4.71)	1,536 (15.67)	9,801

N/A: not applicable means that antibiotic was not reported for the isolate or was not available for the isolated or is not tested at all for the isolate and as such not reported.