

The Emergence of Carbapenem- and Colistin-Resistant Enterobacteria in Senegal

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Citation: Sarr, H.; Niang, A.A.; Diop, A.; Mediannikov, O.; Zerrouki, H.; Diene, S.M.; Lo, S.; Dia, M.L.; Sow, A.I.; Fenollar, F.; et al. The Emergence of Carbapenem- and Colistin-Resistant Enterobacteria in Senegal.

Pathogens **2023**, *12*, 974. <https://doi.org/10.3390/pathogens12080974>

Academic Editors: Carla Calia and Lawrence S. Young

Received: 24 May 2023

Revised: 19 July 2023

Accepted: 24 July 2023

Published: 26 July 2023



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Supplementary Material

Table S1. Distribution of strains isolated, and antibiotic resistance genes detected by year.

		Years			
		2019	2020	2021	2022
Bacterial Species	<i>E. coli</i> (n = 146)	51 (34.9%)	47 (32.2%)	36 (24.7%)	12 (8.2%)
	<i>K. pneumoniae</i> (n = 52)	0 (0%)	5 (96%)	24 (46.2%)	23 (44.2%)
	<i>E. cloacae</i> (n = 33)	6 (18.2%)	10 (30.3%)	10 (30.3%)	7 (21.2%)
	<i>C. freundii</i> (n = 5)	0 (0%)	1 (20%)	2 (40%)	2 (40%)
	<i>K. aerogenes</i> (n = 1)	0 (0%)	0 (0%)	1 (100%)	0 (0%)
	<i>P. mirabilis</i> (n = 1)	0 (0%)	0 (0%)	0 (0%)	1 (100%)
	<i>S. marcescens</i> (n = 2)	1 (50%)	1 (50%)	0 (0%)	0 (0%)
	<i>bla</i> _{CTX-A}	48 (23.9%)	47 (23.4%)	64 (31.8%)	42 (20.9%)
	<i>bla</i> _{CTX-B}	0 (0%)	1 (100%)	0 (0%)	0 (0%)
	<i>bla</i> _{SHV}	4 (4.4%)	16 (17.8%)	38 (42.2%)	32 (35.6%)
Genes	<i>bla</i> _{TEM}	38 (22.5%)	46 (27.2%)	52 (30.8%)	33 (19.5%)
	<i>bla</i> _{OXA-48}	2* (14.3%)	2* (14.3%)	6* (42.9%)	4* (28.6%)
	<i>bla</i> _{NDM}	3* (23.1%)	0 (0%)	6* (46.2%)	4* (30.8%)
	<i>mcr-8</i>	0 (0%)	1 (100%)	0 (0%)	0 (0%)
Hospitals	Ziguinchor	0 (0%)	19 (22.1%)	47 (54.7%)	20 (23.3%)
	Dakar	58 (37.7%)	45 (29.2%)	26 (16.9%)	25 (16.2%)

* Strains with a positive β -CARBA test.**Table S2.** Distribution of antibiotic resistance by bacterial species.

Antibiotics	Bacterial Species						
	<i>E. coli</i> (n = 146)	<i>K. pneumoniae</i> (n = 52)	<i>E. cloacae</i> (n = 33)	<i>C. freundii</i> (n = 5)	<i>K. aerogenes</i> (n = 1)	<i>P. mirabilis</i> (n = 1)	<i>S. marcescens</i> (n = 2)
AMX	146	52	33	5	1	1	2
	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)
AMC	139	49	33	5	1	1	2
	(95.2%)	(94.2%)	(100%)	(100%)	(100%)	(100%)	(100%)
FEP	110	50	25	4	0	0	1
	(75.3%)	(96.2%)	(75.8%)	(80%)	(0%)	(0%)	(50%)
TPZ	106	47	22	4	1	1	0
	(72.6%)	(90.4%)	(66.7%)	(80%)	(100%)	(100%)	(0%)
MEC	21	13	6	1	0	1	2
	(14.4%)	(25%)	(18.2%)	(20%)	(0%)	(100%)	(100%)
CRO	119	51	29	4	0	1	2
	(81.5%)	(98.1%)	(87.9%)	(80%)	(0%)	(100%)	(100%)
	* 5 (1–4)	* 7 (0.75–6)	* 8 (0.74–24)	* 2 (2–12)	0	0	0

ETP	(3.4%) * 1 (4)	(13.5%) * 2 (4)	(24.2%) * 2 (4–6)	(40%) * 1 (32)	(0%) 0	(0%) * 1 (3)	(0%) 0
IPM	(0.7%) 2	(3.8%) 12	(6.1%) 11	(20%) 0	(0%) 0	(100%) 0	(0%) 0
FF	(1.4%) 7	(23.1%) 5	(33.3%) 4	(0%) 0	(0%) 0	(0%) 0	(0%) 1
FT	(4.8%) 111	(9.6%) 37	(12.1%) 22	(0%) 2	(0%) 0	(0%) 1	(50%) 1
SXT	(76%) 21	(71.2%) 6	(66.7%) 2	(40%) 0	(0%) 0	(100%) 0	(50%) 1
AK	(14.4%) 111	(11.5%) 39	(6.1%) 33	(0%) 5	(0%) 0	(0%) 1	(50%) 0
CIP	(76%) 118	(75%) 27	(100%) 20	(100%) 2	(0%) 0	(100%) 1	(0%) 1
TET	(80.8%) 0	(51.9%) 0	(60.6%) 1 (>64)	(40%) 0	(0%) 0	(100%) 1 (>64)	(50%) 2 (>64)
CS	(0%) 85	(0%) 42	(3%) 21	(0%) 3	(0%) 0	(100%) 1	(100%) 1
GN	(58.2%)	(80.8%)	(63.6%)	(60%)	(0%)	(100%)	(50%)

AMX = Amoxicillin, AMC = Amoxicillin/Clavulanic Acid, FEP = Cefepime, TPZ = Piperacillin/Tazobactam, MEC = Mecillinam, CRO = Ceftriaxone, ETP = Ertapenem, IPM = Imipenem, FF = Fosfomicin, FT = Furan, SXT = Trimethoprim/Sulfamethoxazole, AK = Amikacin, CIP = Ciprofloxacin, TET = Tetracycline, CS = Colistin, GN = Gentamicin. * = MIC value in mg/L.