

[Supplementary materials]

From Colonisation to Infection: Assessing the BSI Potential in Patients with KPC, NDM, VRE, and CRAB Rectal Colonisation

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Table S1: Overall distribution of different rectal colonisations and associated BSI

Microrganism	β-lactamase	Rectal colonisation	BSI	Infection rate (%)
<i>K.pneumoniae</i>	KPC	769	97	12.6
	NDM	269	28	10.4
	ESBL	99	5	5.1
	VIM	50	4	8
	OXA48	7	1	14.3
	AMPC	1	0	0
<i>K.aerogenes</i>	AMPC	16	1	6.6
	KPC	16	0	0
	ESBL	3	0	0
	VIM	1	1	100
	NDM	3	0	0
<i>K.oxytoca</i>	VIM	12	0	0
	ESBL	4	0	0
	KPC	3	0	0
	NDM	2	0	0
<i>K.variicola</i>	KPC	2	0	0
	VIM	1	0	0
	ESBL	1	0	0
	NDM	1	0	0
	AMPC	1	1	100
<i>E.coli</i>	ESBL	320	5	1.6
	NDM	20	0	0
	KPC	50	1	2
	VIM	24	0	0
	OXA48	7	1	14.3
	AMPC	1	0	0
<i>E.faecium</i>	VRE	1056	33	3.1
<i>E.faecalis</i>	VRE	16	0	0
<i>A.baumannii</i>	CRAB	190	38	20
<i>C.freundii</i>	KPC	4	0	0
	VIM	24	0	0
	AMPC	5	0	0
	NDM	1	0	0
<i>C.farmeri</i>	VIM	9	0	0
	KPC	1	0	0
	NDM	1	0	0
<i>C.koseri</i>	KPC	1	0	0
<i>C.braakii</i>	ESBL	1	0	0
	AMPC	1	0	0
<i>C.amalonaticus</i>	VIM	2	0	0
	NDM	1	0	0
	OXA48	1	0	0
<i>Citrobacter spp</i>	VIM	2	0	0
<i>E.cloacae</i>	VIM	35	2	5.7
	ESBL	12	0	0

	AMPC	12	2	16.7
	KPC	2	0	0
	NDM	2	0	0
<i>E.bugandensis</i>	VIM	1	0	0
	NDM	1	0	0
	ESBL	1	0	0
	AMPC	1	0	0
<i>E.kobei</i>	VIM	1	0	0
	ESBL	2	0	0
<i>E.asburiae</i>	VIM	1	0	0
	NDM	2	0	0
<i>E.xiangfangensis</i>	VIM	1	0	0
<i>P.mirabilis</i>	ESBL	2	0	0
	AMPC	1	0	0
<i>P.stuartii</i>	VIM	1	0	0
<i>M.morganii</i>	ESBL	1	0	0
<i>S.marcescens</i>	ESBL	1	0	0
<i>Hafnia alvei</i>	AMPC	1	0	0
<i>Paeruginosa</i>	VIM	2	0	0

Table S2: Distribution of BSIs according to the ward and MDRO

KPC	Surgical wards	Medical wards	ICU	Total
BSI	9 (6.67%)	15 (7.35%)	73 (16.98%)	97
Not BSI	126 (93.33%)	189 (92.65%)	357 (83.02%)	672
Total	135	204	430	769
NDM	Surgical wards	Medical wards	ICU	Total
BSI	1 (2.27%)	8 (6.25%)	19 (19.59%)	28
Not BSI	43 (97.73%)	120 (93.75%)	78 (80.41%)	241
Total	44	128	97	269
VRE	Surgical wards	Medical wards	ICU	Total
BSI	3 (3.45%)	21 (2.51%)	9 (6.82%)	33
Not BSI	84 (96.55%)	816 (97.49%)	123 (93.18%)	1023
Total	87	837	132	1056
CRAB	Surgical wards	Medical wards	ICU	Total
BSI	4 (14.29%)	5 (14.29%)	29 (22.83%)	38
Not BSI	24 (85.71%)	30 (85.71%)	98 (77.17%)	152
Total	28	35	127	190

Table S3: Estimated probability of progression from rectal colonisation to bloodstream infection (BSI) in patients with “favourable” and “unfavourable” profiles

MDRO	Description	BSI probability and 95%CI
KPC :)	Patient in medical ward, with metabolic syndrome	0.05 (0.03, 0.09)
KPC :(	Patient in ICU, with chronic liver disease and (Oncohaematology disease or Bone Marrow Transplant)	0.72 (0.30, 0.94)
NDM :)	Female patient in surgical ward	0.01 (0.00, 0.09)
NDM :(	Male patient in ICU	0.25 (0.16, 0.36)
VRE :)	Female patient in medical ward	0.01 (0.00, 0.02)
VRE :(	Male patient in ICU with (Oncohaematology disease or Bone Marrow Transplant)	0.27 (0.10, 0.53)
CRAB :)	Healthy patient	0.20 (0.15, 0.27)
CRAB :(	Patient with Solid Organ Transplant	0.75 (0.25, 0.96)