

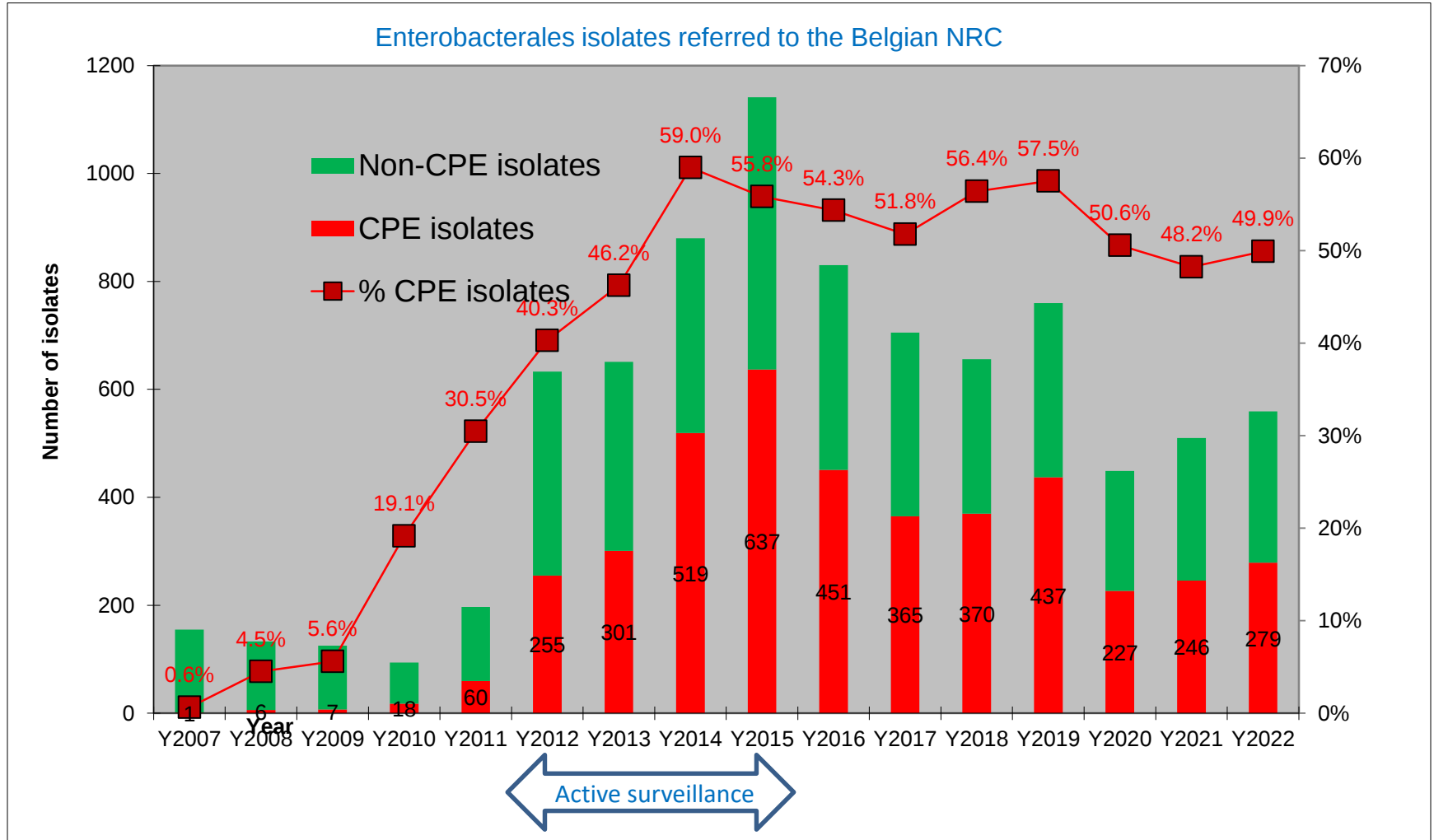
Microbiological surveillance of multidrug-resistant Gram-negative bacilli in Belgium: Data from the National Reference Center (NRC)

National Reference Center for Antibiotic-resistant Gram-negative bacilli
CHU UCL Namur, Yvoir, Belgium

**Microbiological data of carbapenemase-producing
Enterobacterales (CPE) from the NRC**

Enterobacterales referred for CPE (isolates)

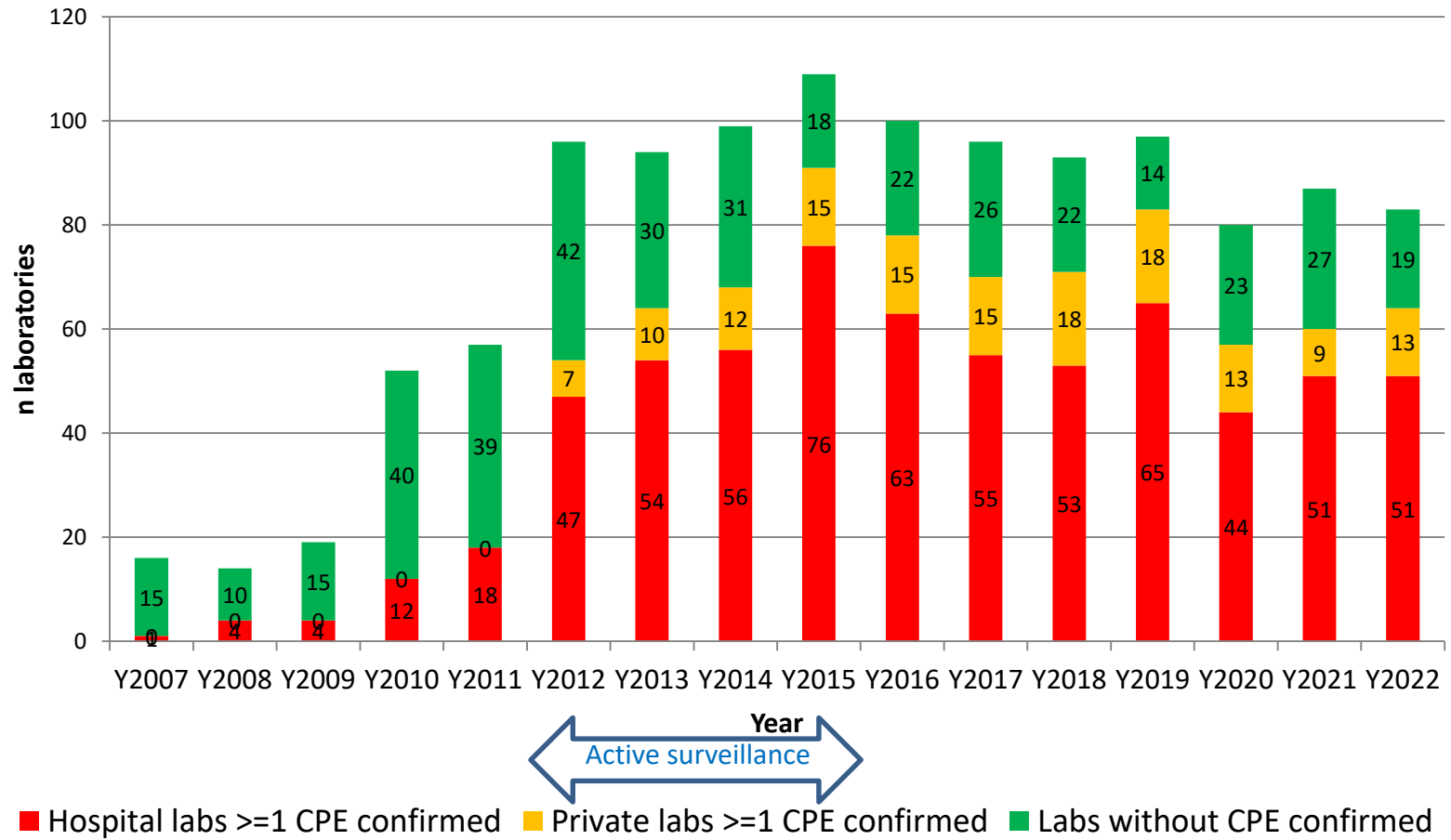
NRC Belgium



Enterobacterales referred for CPE (laboratories)

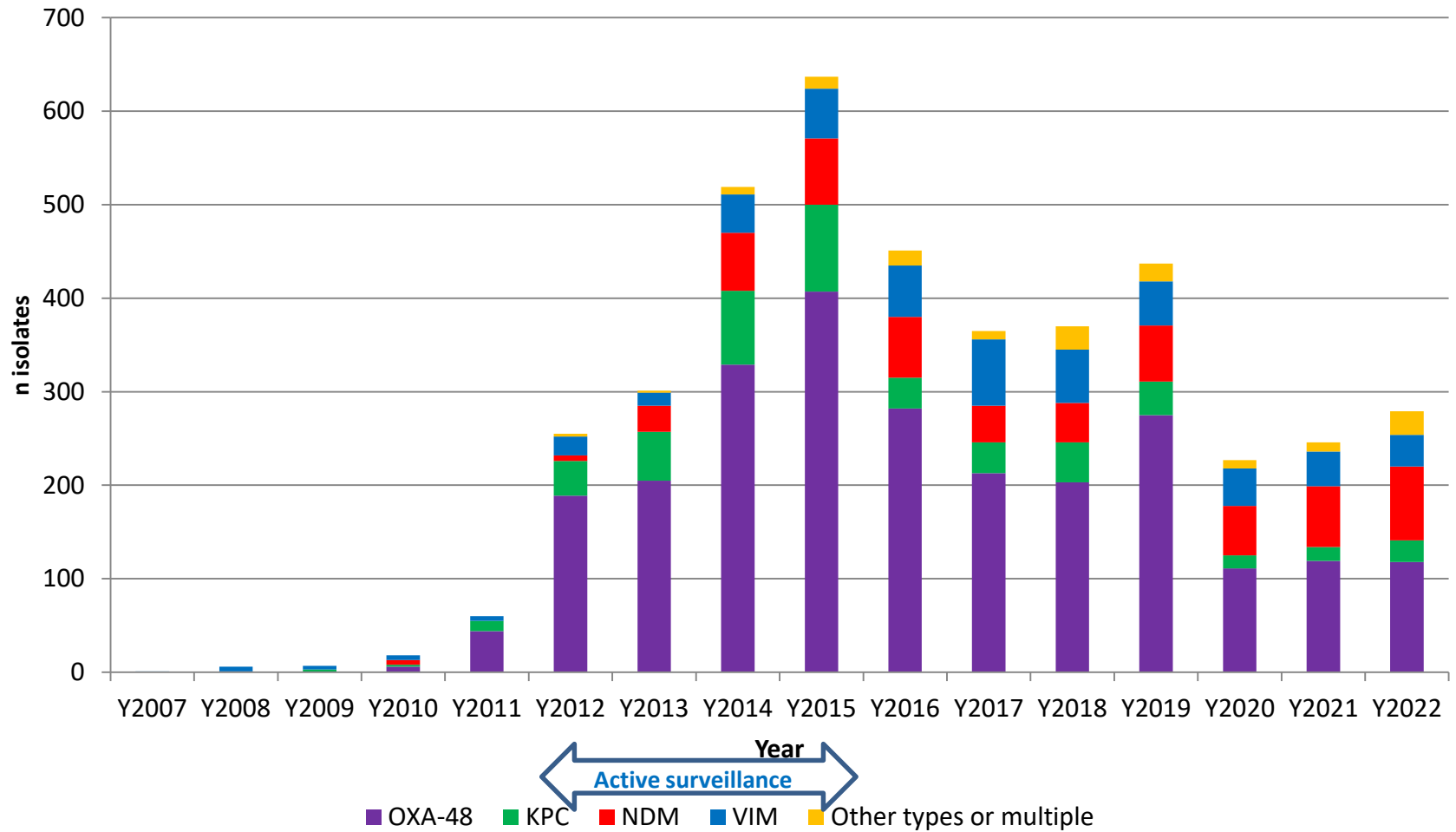
NRC Belgium

Laboratories referring for confirmation of CPE



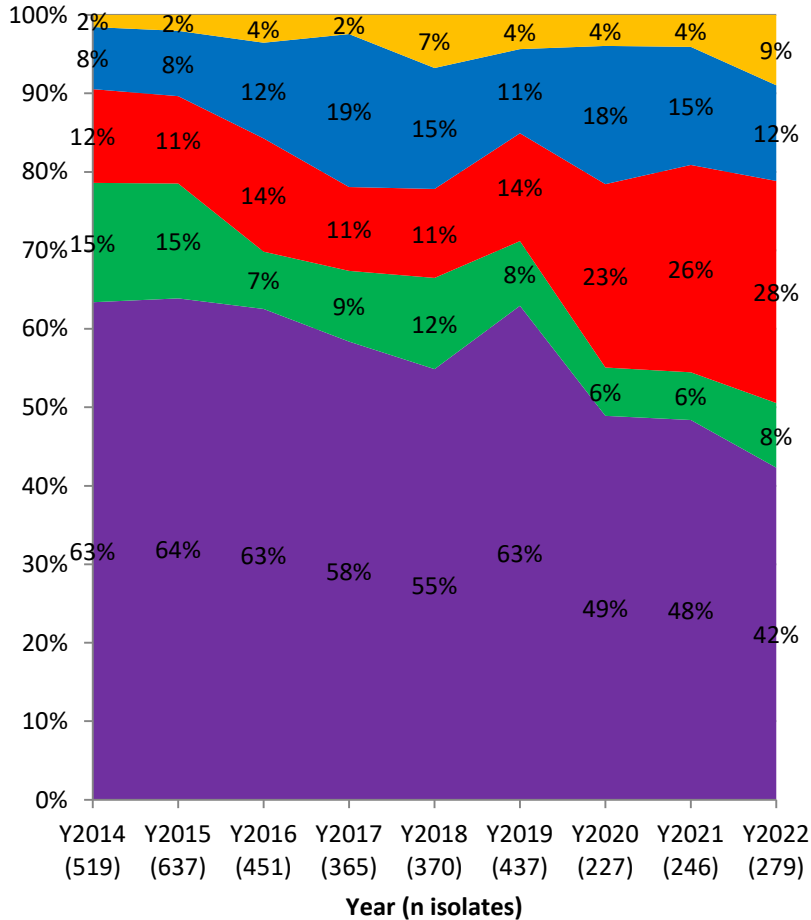
CPE carbapenemase types (NRC Belgium)

Carbapenemase types distribution of CPE



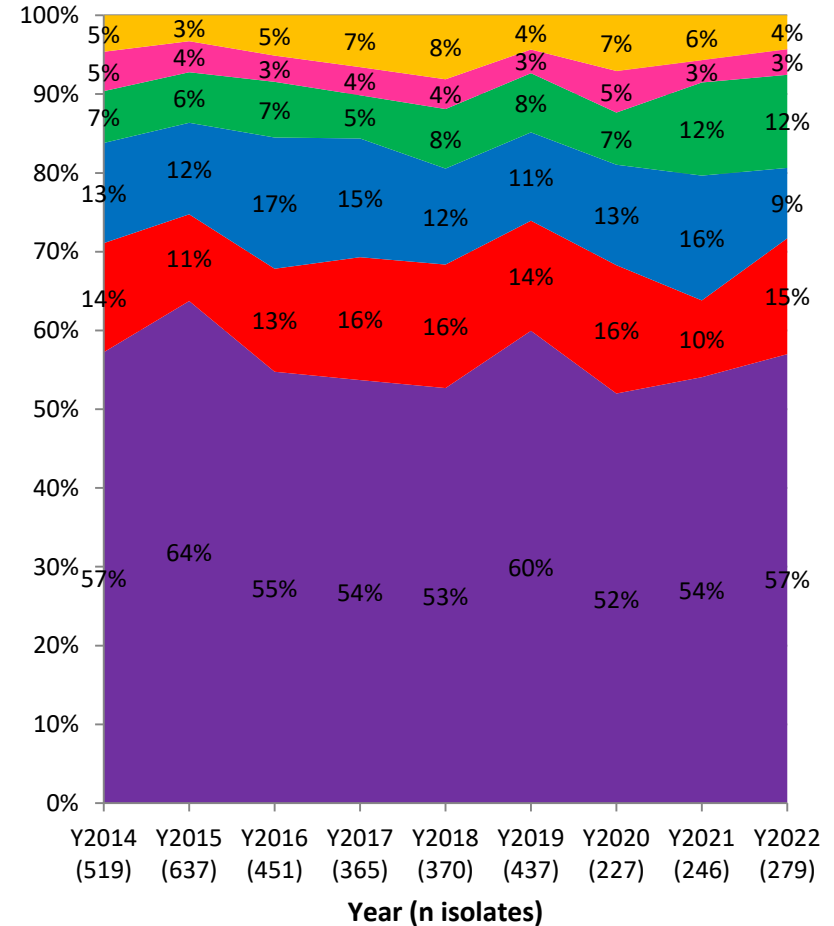
Yearly distribution of CPE

Carbapenemase type distribution of CPE



■ OXA-48 ■ KPC ■ NDM ■ VIM ■ Other types or multiple

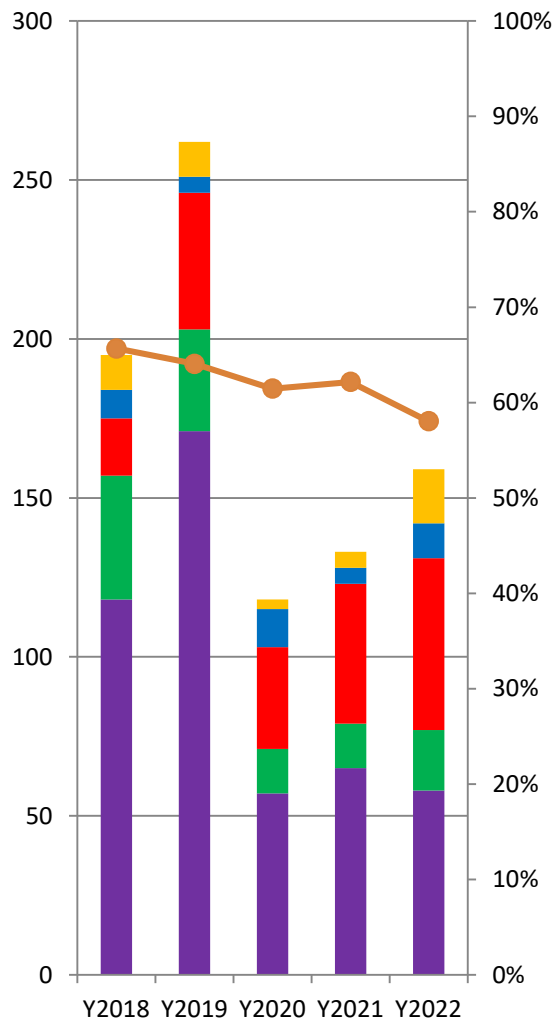
Species distribution of CPE



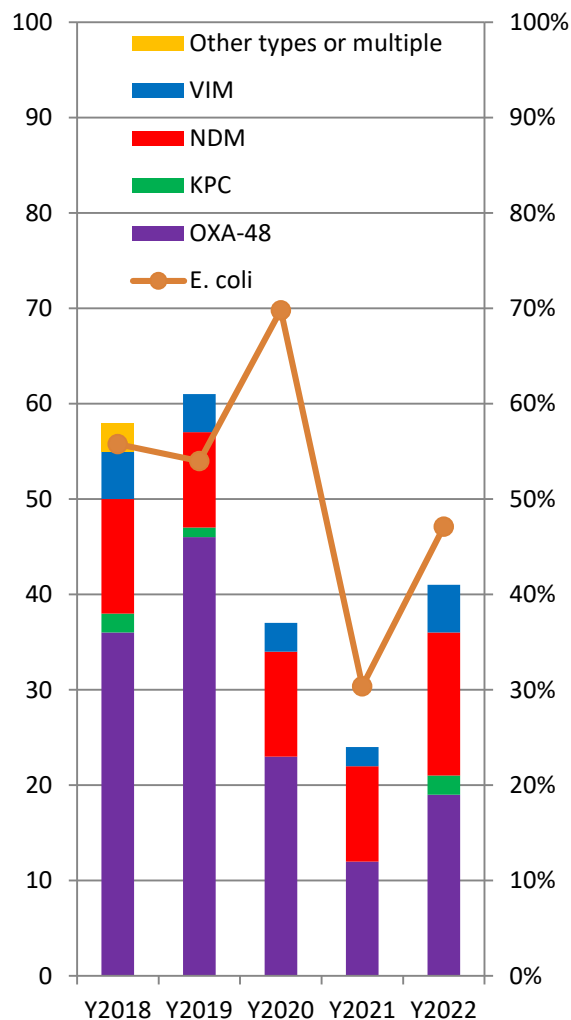
■ K. pneumoniae ■ E. coli ■ E. cloacae complex
 ■ C. freundii ■ K. oxytoca ■ Other species

Yearly evolution of CPE per species

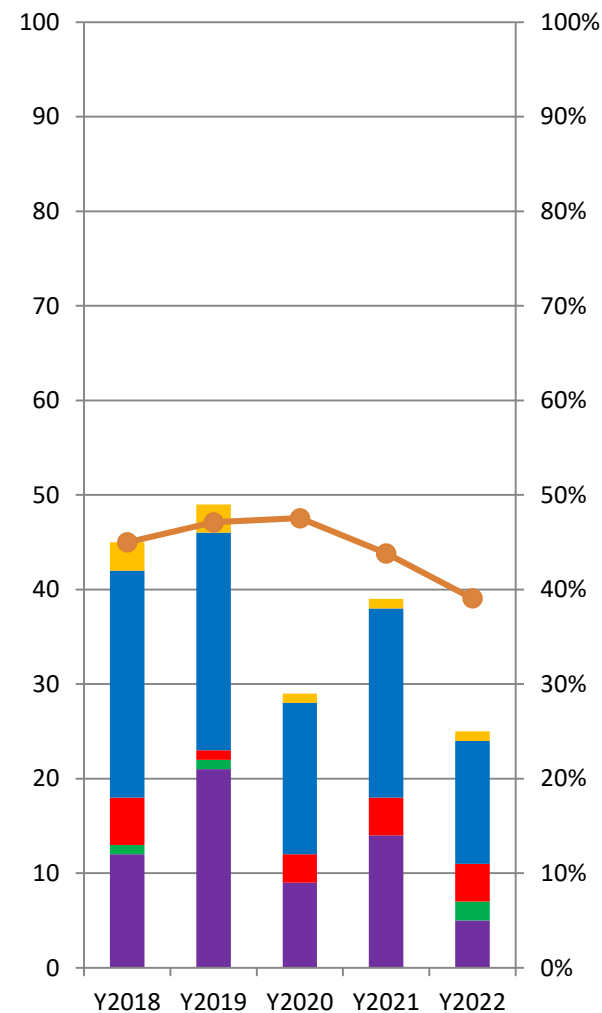
CPE: *K. pneumoniae*



CPE: *E. coli*



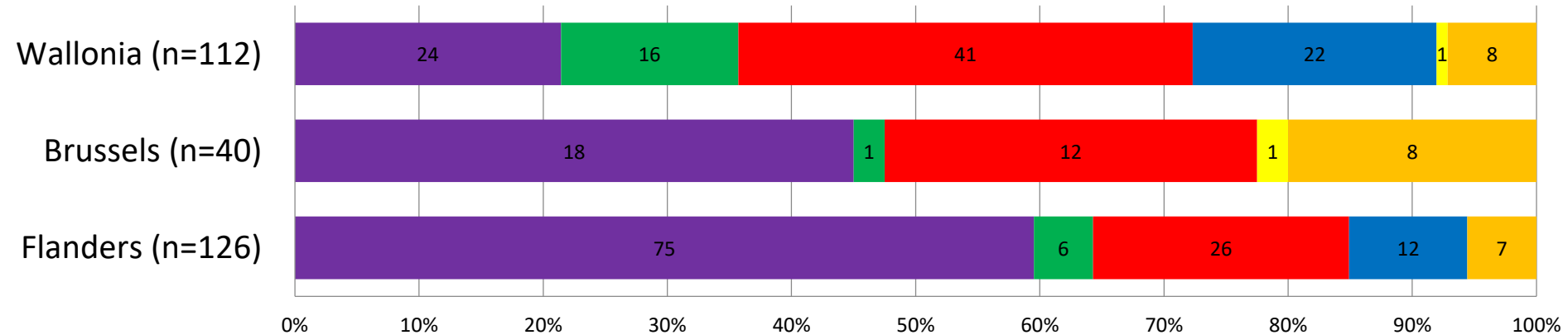
CPE: *E. cloacae*



Regional distribution of laboratories referring CPE

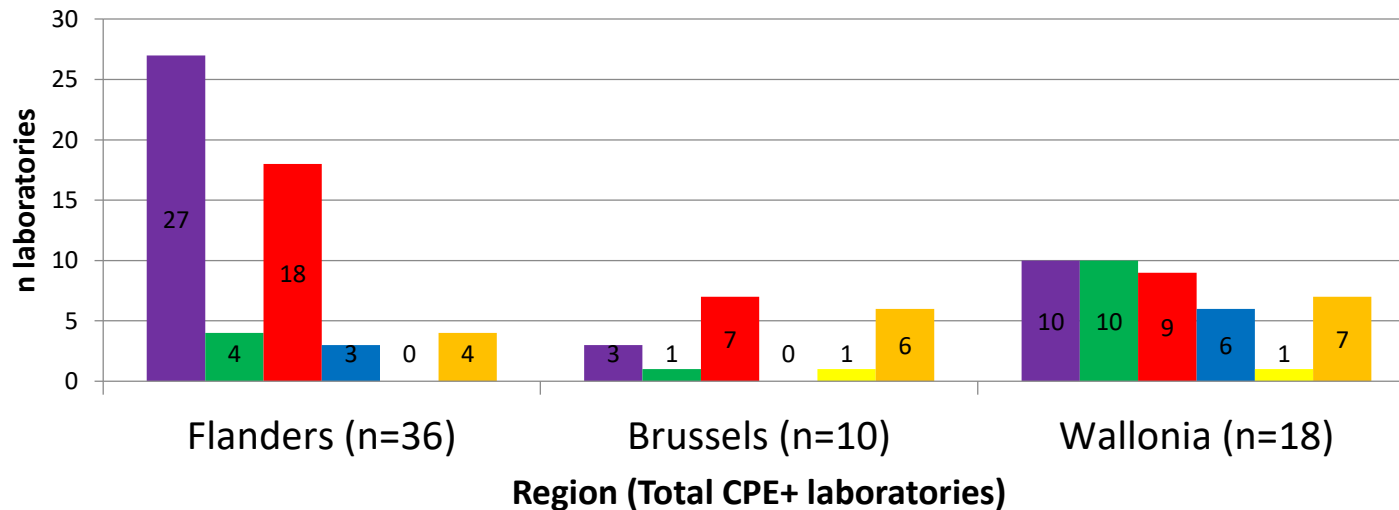
Carbapenemase types among CPE per region in Belgium in 2022 (n isolates)

■ OXA-48 ■ KPC ■ NDM ■ VIM ■ Other ■ Multiple



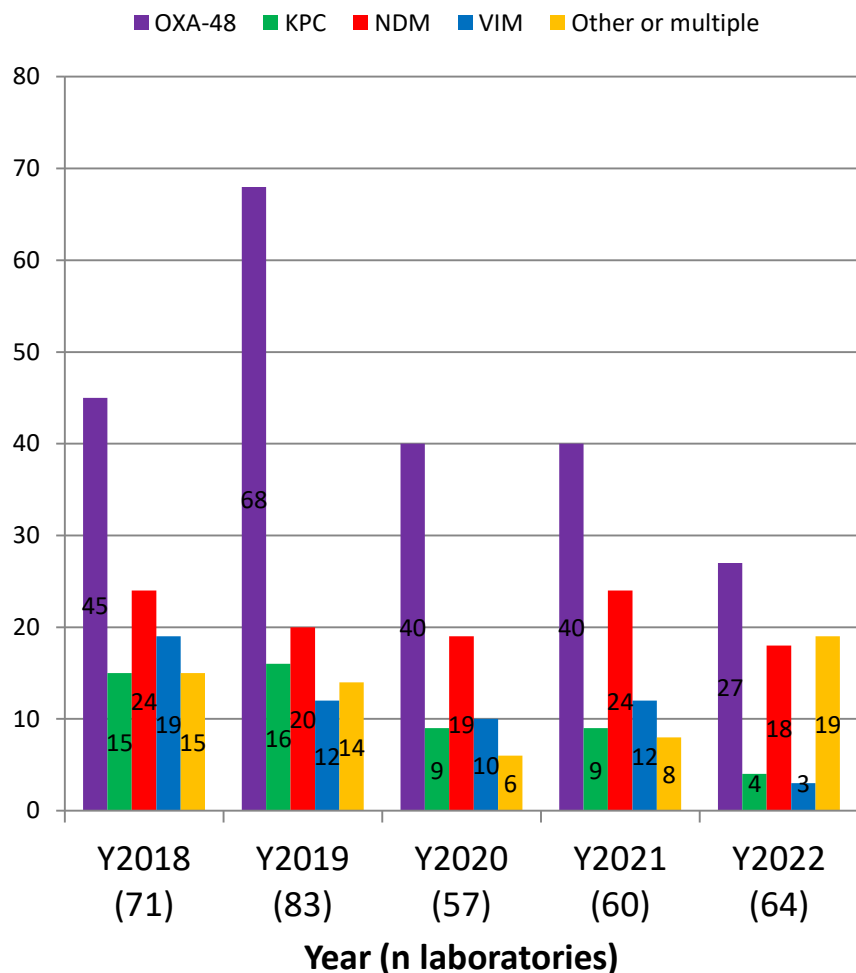
Carbapenemase types among CPE per region in Belgium in 2022 (n laboratories)

■ OXA-48
■ KPC
■ NDM
■ VIM
■ Other
■ Multiple

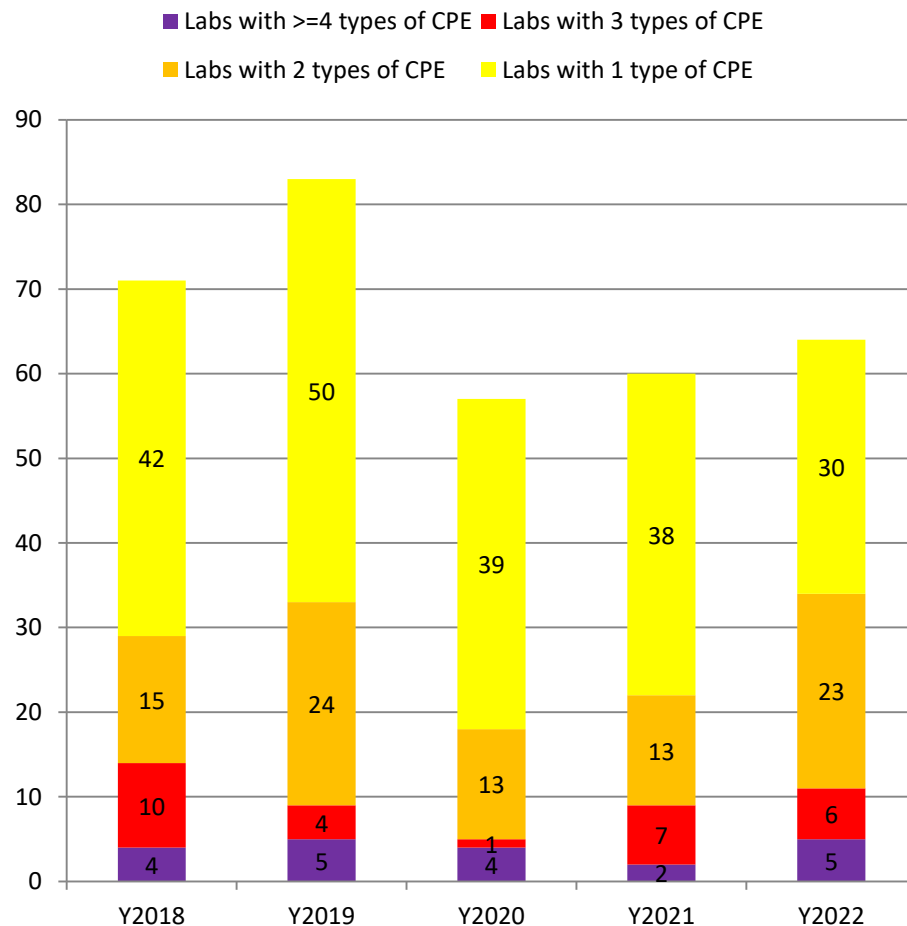


Diversity of carbapenemases among CPE in Belgium

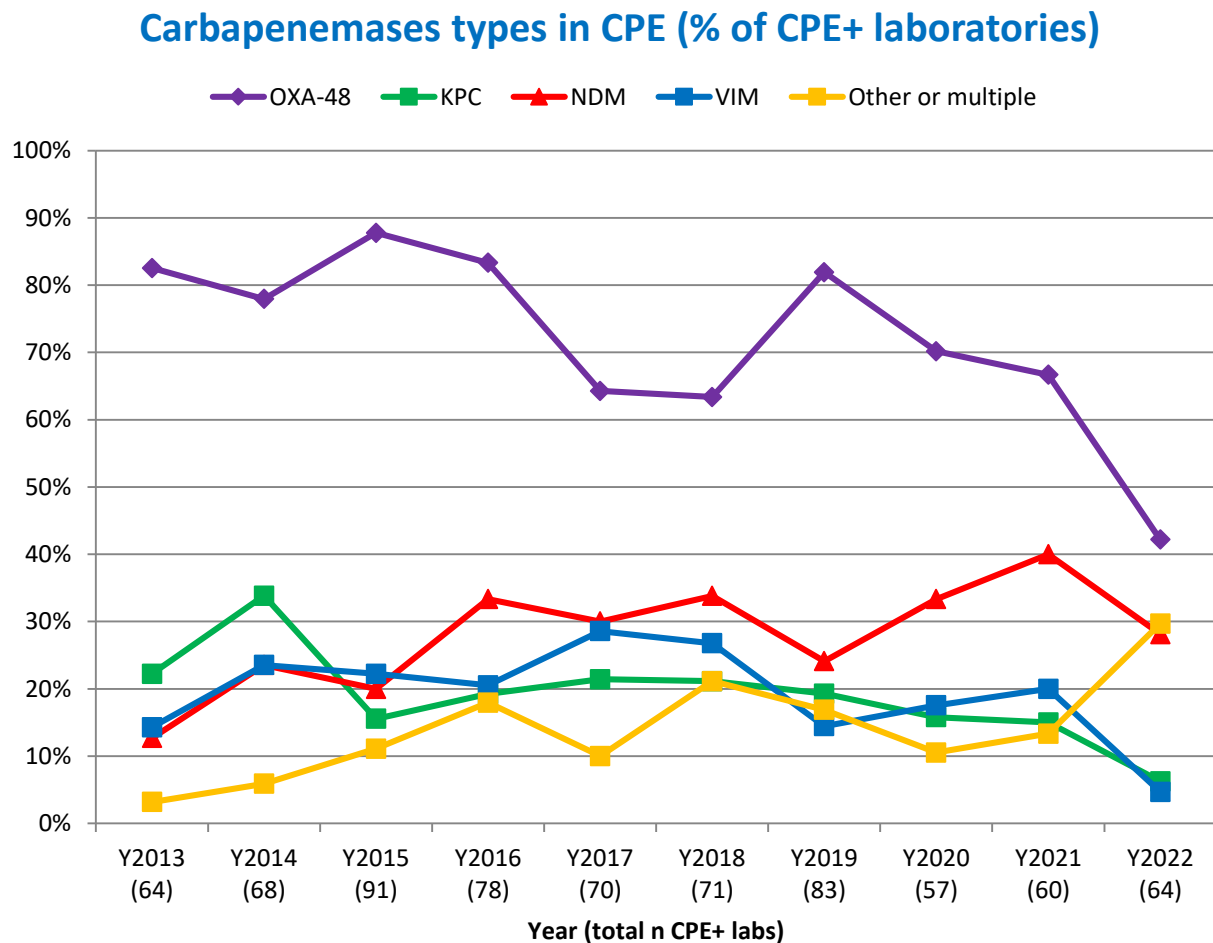
Carbapenemase type distribution of CPE in Belgium (n laboratories)



Number of carbapenemase types in CPE (laboratories)



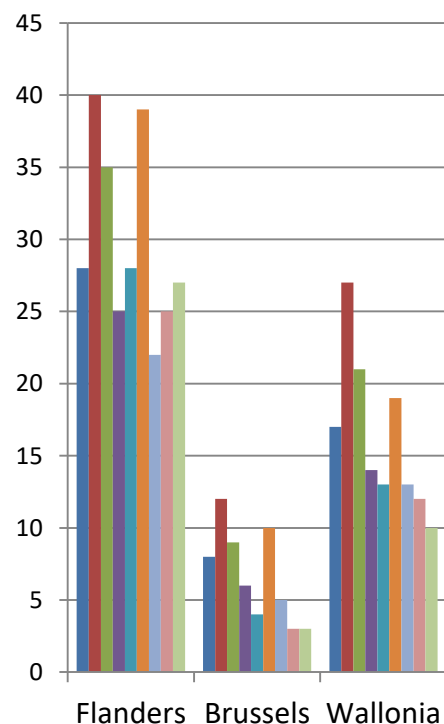
Diversity of carbapenemases among CPE in Belgium



Regional distribution of carbapenemase types

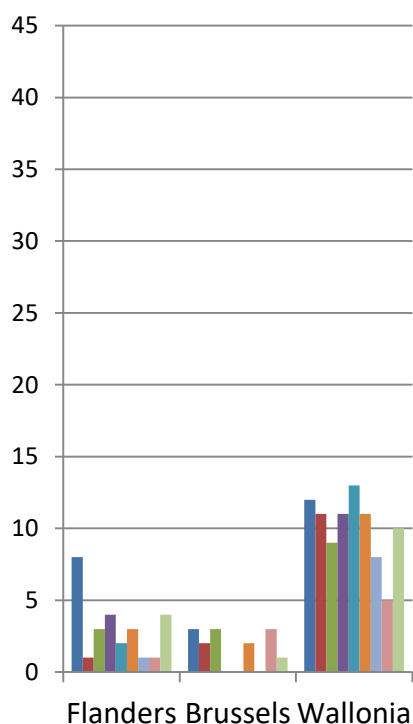
OXA-48 CPE (n laboratories)

■ Y2014 (53) ■ Y2015 (79)
 ■ Y2016 (65) ■ Y2017 (45)
 ■ Y2018 (45) ■ Y2019 (68)
 ■ Y2020 (40) ■ Y2021 (40)
 ■ Y2022 (40)



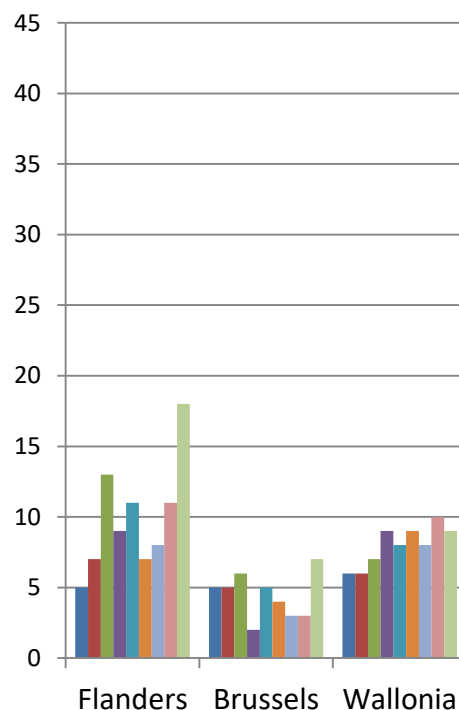
KPC CPE (n laboratories)

■ Y2014 (23) ■ Y2015 (14)
 ■ Y2016 (15) ■ Y2017 (15)
 ■ Y2018 (15) ■ Y2019 (16)
 ■ Y2020 (9) ■ Y2021 (9)
 ■ Y2022 (15)



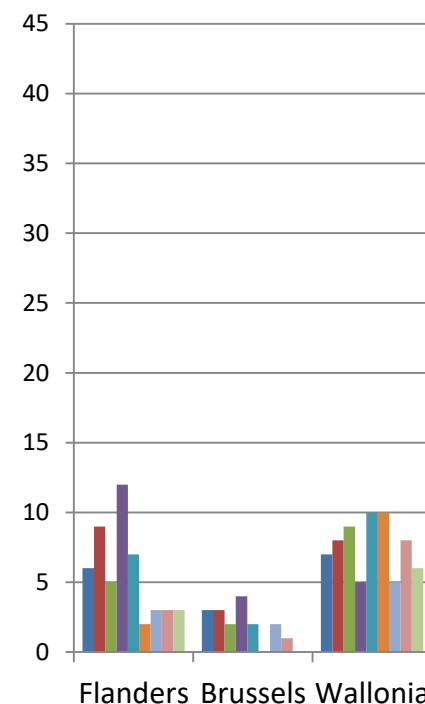
NDM CPE (n laboratories)

■ Y2014 (16) ■ Y2015 (18)
 ■ Y2016 (26) ■ Y2017 (20)
 ■ Y2018 (24) ■ Y2019 (20)
 ■ Y2020 (19) ■ Y2021 (24)
 ■ Y2022 (34)



VIM CPE (n laboratories)

■ Y2014 (16) ■ Y2015 (20)
 ■ Y2016 (16) ■ Y2017 (21)
 ■ Y2018 (19) ■ Y2019 (12)
 ■ Y2020 (10) ■ Y2021 (12)
 ■ Y2022 (9)



EUCAST %S by BMD for CPE NRC 2021-2022 (n=560)

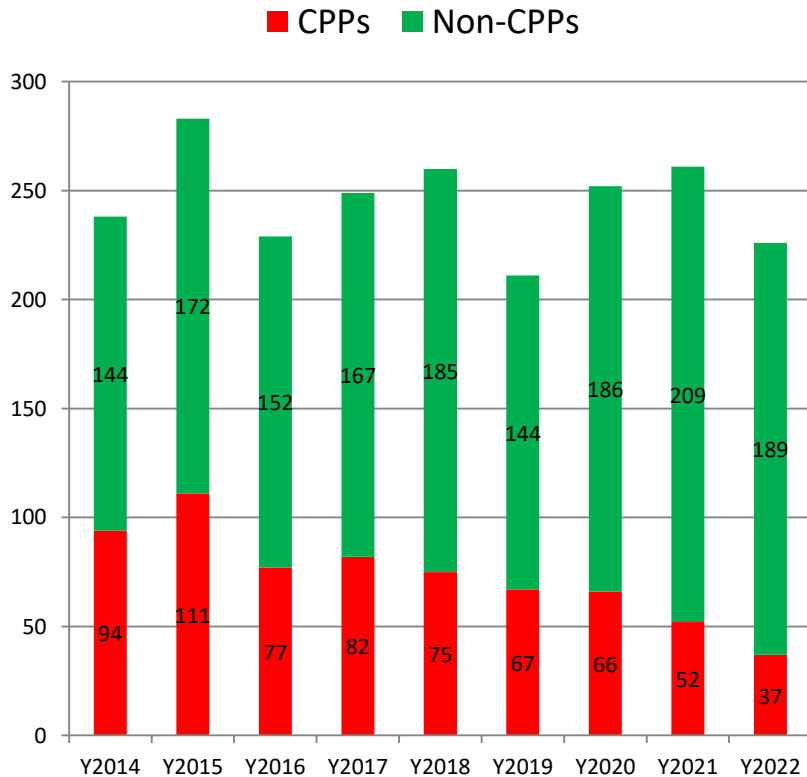
%S/I_BMD_EUCAST	OXA-48	KPC	NDM	VIM	non-CPE	Total
Total n	210	36	135	65	81	560
Temocillin	0%	8%	4%	2%	62%	11%
Piperacillin/tazobactam	1%	0%	1%	0%	53%	8%
Aztreonam	44%	0%	9%	52%	57%	33%
Cefotaxime	32%	6%	0%	0%	52%	20%
Ceftazidime	42%	3%	0%	5%	58%	25%
Cefepime	53%	3%	1%	29%	64%	34%
Meropenem	87%	36%	24%	92%	89%	65%
Ceftolozane/tazobactam	34%	3%	0%	0%	63%	22%
Meropenem/vaborbactam	87%	97%	33%	94%	90%	71%
Ceftazidime/avibactam	100%	100%	1%	23%	97%	60%
Cefiderocol	97%	66%	71%	92%	93%	85%
Cotrimoxazole (DD)	50%	58%	51%	33%	55%	51%
Ciprofloxacin	24%	6%	7%	46%	41%	23%
Gentamicin	67%	56%	38%	78%	68%	58%
Amikacin	90%	42%	45%	97%	86%	73%
Fosfomycin IV	72%	58%	81%	84%	71%	74%
Tigecycline	69%	58%	64%	66%	67%	66%
Colistin	91%	72%	86%	92%	39%	79%

Microbiological data of multidrug-resistant *Pseudomonas* and *Acinetobacter* from the NRC

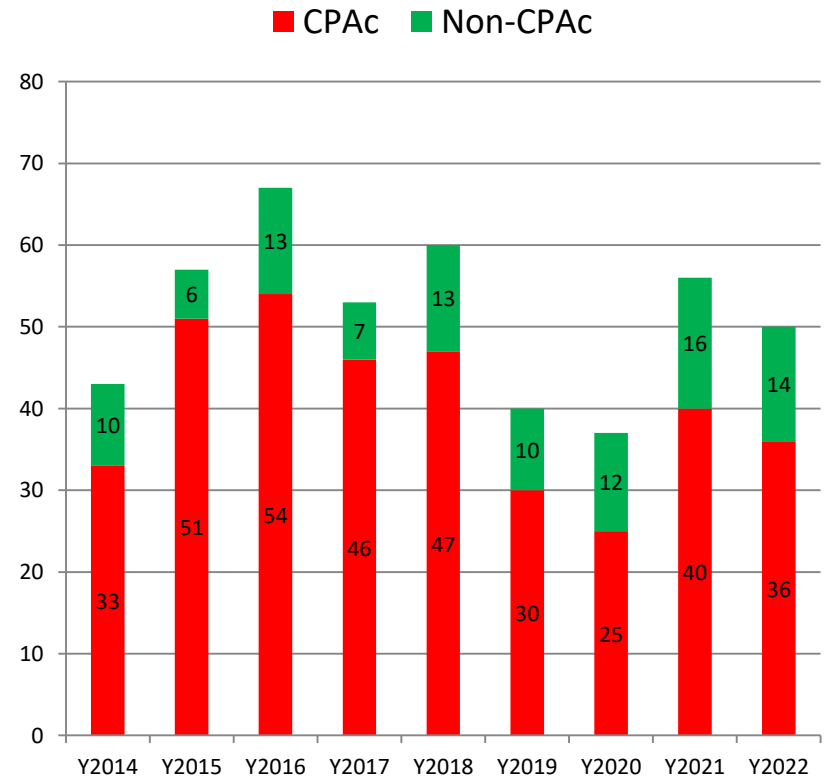
National Reference Center for Antibiotic-resistant Gram-negative bacilli
CHU UCL Namur, Yvoir, Belgium

Pseudomonas and *Acinetobacter* referred to the NRC

***Pseudomonas* spp isolates, NRC
Belgium**

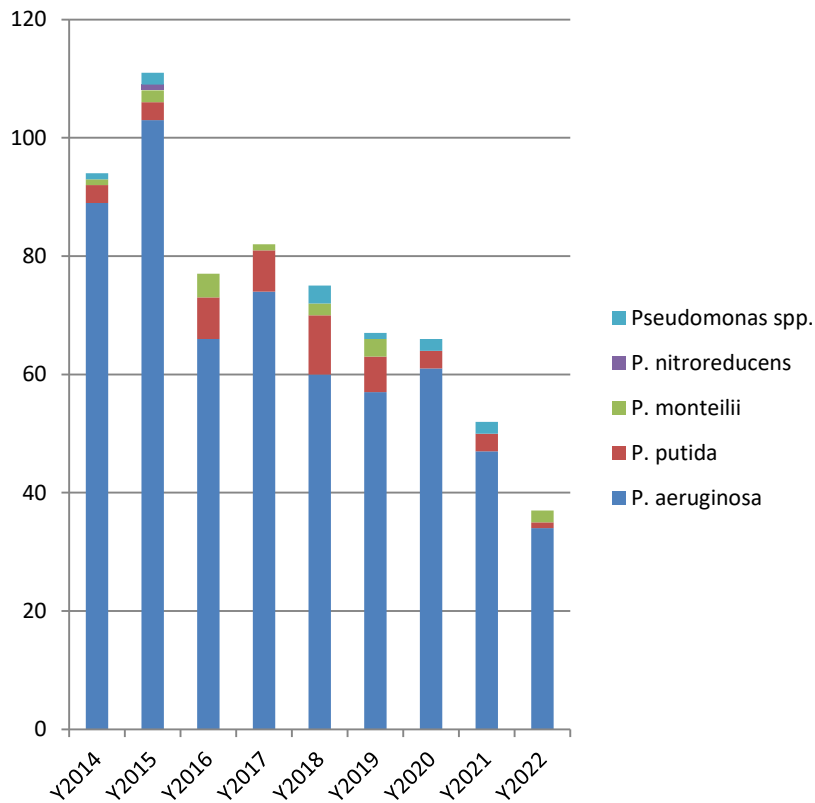


***Acinetobacter* spp isolates, NRC
Belgium**

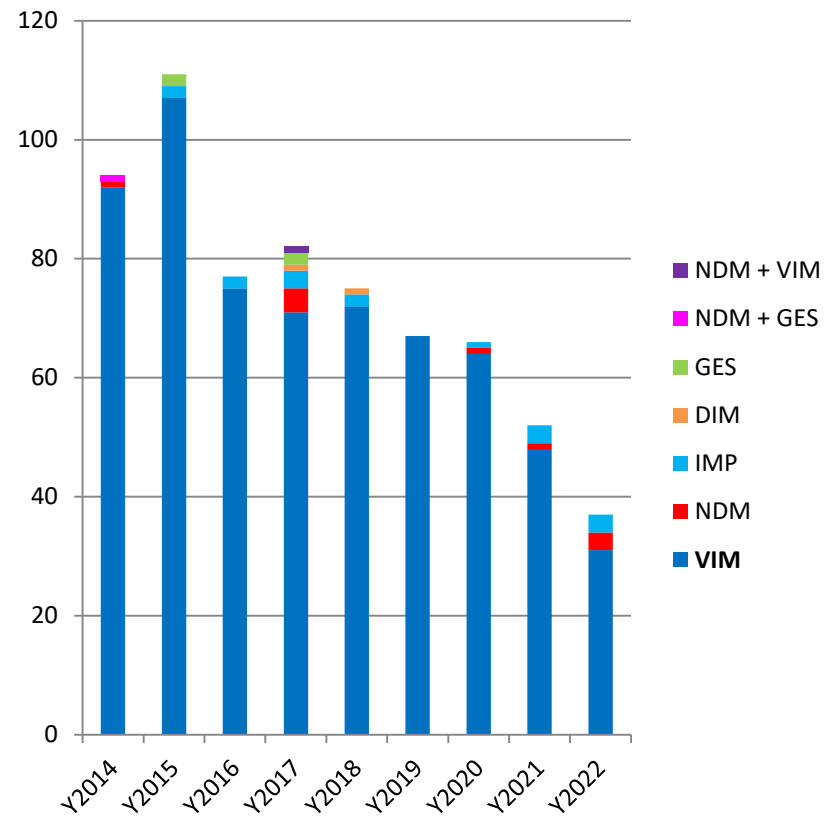


Carbapenemase-producing *Pseudomonas* (CPPs) confirmed at the NRC

Species among carbapenemase-producing
Pseudomonas, NRC Belgium

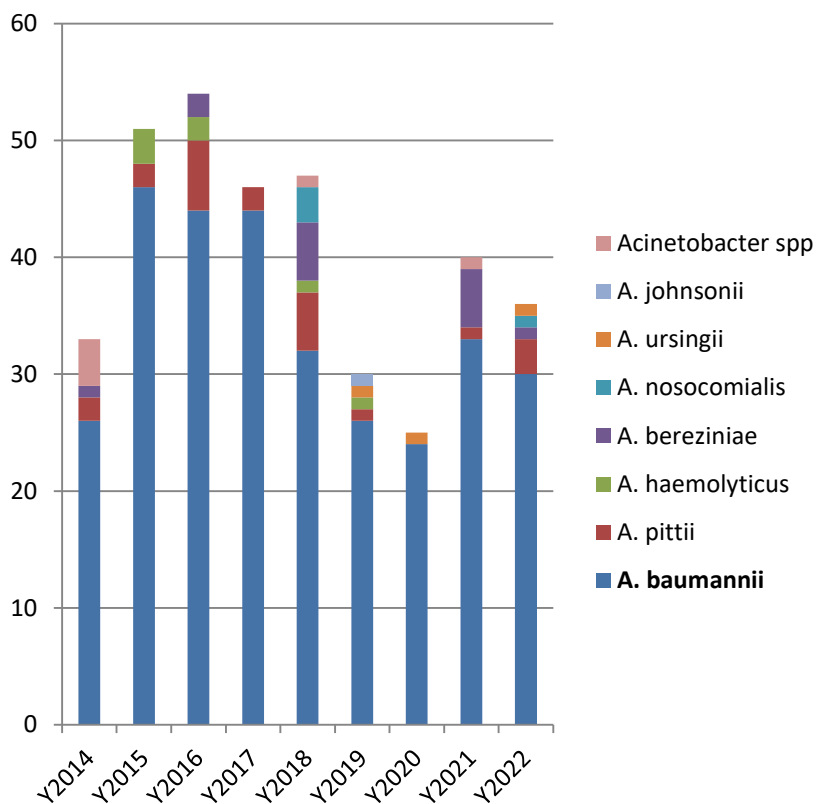


Carbapenemase types among carbapenemase-
producing *Pseudomonas*, NRC Belgium

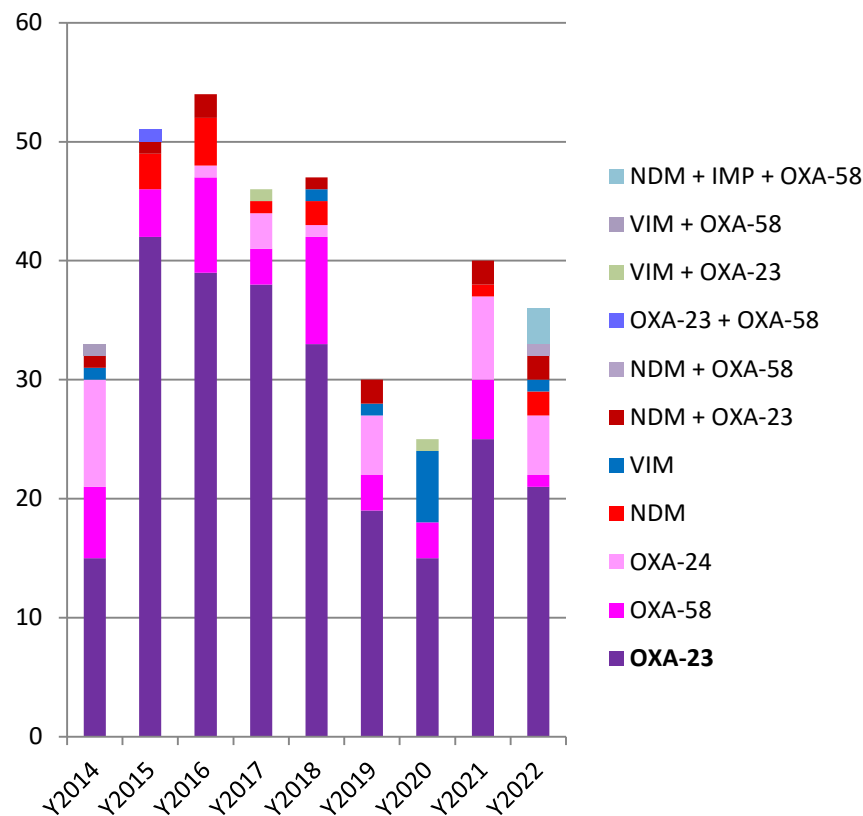


Carbapenemase-producing *Acinetobacter* (CPAc) confirmed at the NRC

Species among carbapenemase-producing
Acinetobacter, NRC Belgium



Carbapenemase types among carbapenemase-
producing *Acinetobacter*, NRC Belgium



EUCAST %S by BMD for *P. aeruginosa*, NRC 2021-2022 (n=184)

%S/I_BMD_EUCAST	NDM	VIM	IMP	non-CPPA	Total
Total n <i>P. aeruginosa</i>	4	61	4	115	184
Piperacillin/tazobactam	0%	0%	25%	24%	15%
Aztreonam	50%	66%	25%	32%	44%
Ceftazidime	0%	0%	0%	16%	10%
Cefepime	0%	0%	0%	16%	10%
Meropenem	0%	3%	0%	48%	30%
Ceftolozane/tazobactam	0%	0%	0%	50%	30%
Ceftazidime/avibactam	0%	0%	0%	54%	33%
Meropenem/vaborbactam	0%	5%	0%	54%	38%
Cefiderocol	0%	100%	100%	93%	93%
Ciprofloxacin	0%	7%	0%	20%	14%
Gentamicin	0%	38%	0%	50%	44%
Amikacin	0%	20%	25%	79%	55%
Fosfomycin (ECOFF)	50%	85%	100%	86%	85%
Colistin	100%	100%	100%	97%	98%