College for the Mother and Newborn

Section Neonatology

Neokiss Annual Report

2011

DRAFT

Neokiss Annual Report
Introduction

Introduction

Preterm infants are at high risk for nosocomial infection rates. Audit and feedback can produce improvement in clinical practices. The national Belgian benchmarking database on preterm infants has included the NeoKiss protocol for infection surveillance with standardized definitions.

Surveillance population criteria: all patients with a birthweight of less than 1500g

Hospital acquired infection criteria: neonatal infections are considered nosocomial when occurring 72 hours after birth.

Tables and graphs are displayed for each individual unit (Nic number) and compared with the entire population (reference).

The reference for a particular indicator is calculated by considering all units as one.

For each indicator results are given as:

- Mean and 95 % CI (confidence interval)
- Median P50(Q1-Q3) (interquartile range) and range

Separate calculations are given for the entire population (overall) and stratified in birthweight categories "500g, 500-999g, 1000-1499g".

Partipating NIC units

Year	Number of NIC units
2011	7

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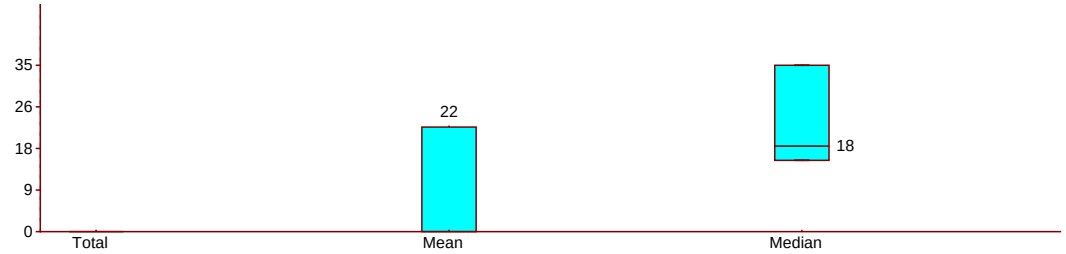
A. General Overview

1. NICU beds

	Count	Total	Mean(SD)	Median(range)	Median(P25,P75)
All NICs	152	22(9)	18(15,35)	18(15,35)	

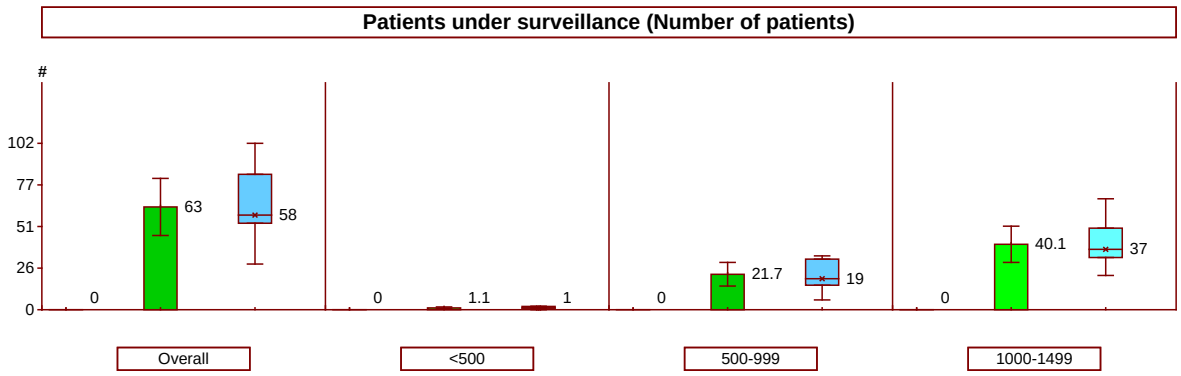
Total: total of beds.
SD: standard deviation over NICs.



2. Patients under surveillance

	Patients under surveillance (Number of patients)							
	NIC 0		Ref:					
	#	%	#	%	Distribution over NICs			
					Mean	(95% CI)	P50[Q1-Q3]	(Range)
Overall	0	0	441	100	63	(45.5 , 80.5)	58 [53 , 83]	(28 , 102)
<500	0	0	8	1.8	1.1	(.6 , 1.7)	1 [1 , 2]	(0 , 2)
500-999	0	0	152	34.5	21.7	(14.5 , 29)	19 [15 , 31]	(6 , 33)
1000-1499	0	0	281	63.7	40.1	(29 , 51.2)	37 [32 , 50]	(21 , 68)

#: number of patients under surveillance.
%: percent of patients under surveillance in a stratified weight over Overall weight.

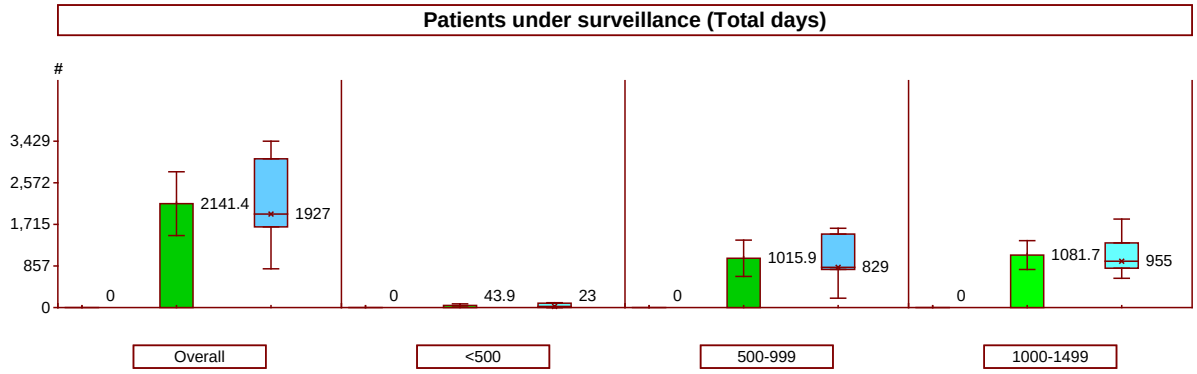


Neokiss Annual Report
A. General Overview

3. Surveillance days per unit

	Patients under surveillance (Total days)							
	NIC 0		Ref:					
	#	%	#	%	Distribution over NICs			
					Mean	(95% CI)	P50[Q1-Q3]	(Range)
Overall	0	0	14990	100	2141.4	(1484.1 , 2798.8)	1927 [1663 , 3066]	(799 , 3429)
<500	0	0	307	2	43.9	(11.3 , 76.4)	23 [3 , 90]	(0 , 100)
500-999	0	0	7111	47.4	1015.9	(641.6 , 1390.1)	829 [786 , 1515]	(193 , 1634)
1000-1499	0	0	7572	50.5	1081.7	(784.4 , 1379)	955 [811 , 1332]	(603 , 1824)

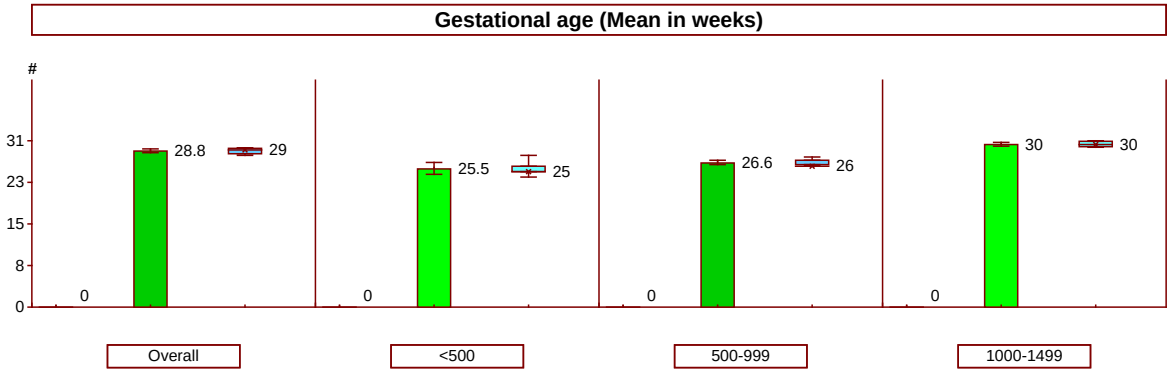
#: number of surveillance days.
%: percent of surveillance days in a stratified weight over Overall weight.



4. Gestational age

	Gestational age (Mean in weeks)				
	NIC 0	REF: All NICs			
	Mean	Global mean	Ref: distribution over NICs		
			(95% CI)	P50[Q1-Q3]	(Range)
Overall	0	28.8	(28.5 , 29.2)	29 [28.3 , 29.3]	(28 , 29.4)
<500	0	25.5	(24.5 , 26.7)	25 [25 , 26]	(24 , 28)
500-999	0	26.6	(26.3 , 27.1)	26 [26.3 , 27.1]	(26.2 , 27.7)
1000-1499	0	30	(29.7 , 30.4)	30 [29.6 , 30.6]	(29.5 , 30.7)

Mean: mean in weeks of GA.
Global mean: mean of GA, all units are considered as a whole.
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution

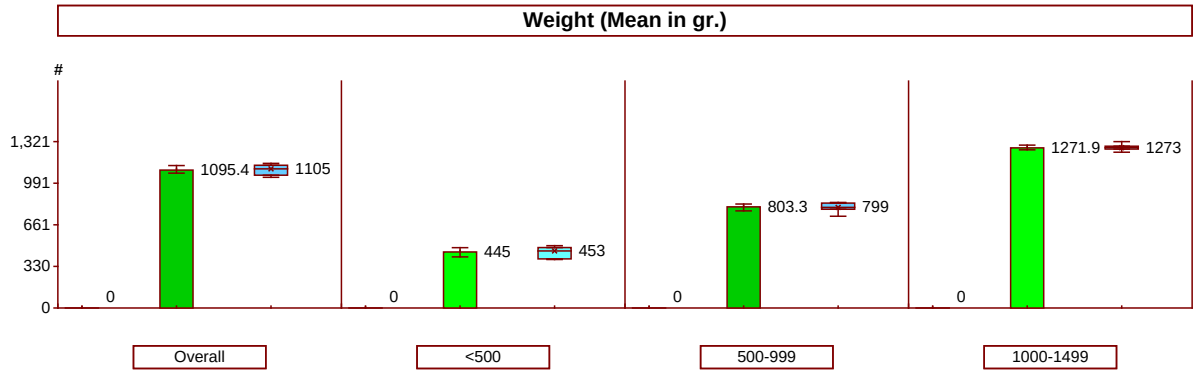


Neokiss Annual Report
A. General Overview

5. Birth weight

	Weight (Mean in gr.)				
	NIC 0	REF: All NICs			
	Mean	Global mean	Ref: distribution over NICs		
			(95% CI)	P50[Q1-Q3]	(Range)
Overall	0	1095.4	(1070.9 , 1131.4)	1105 [1054.6 , 1133.7]	(1038 , 1148.7)
<500	0	445	(405.9 , 479.1)	453 [390 , 480]	(385 , 495)
500-999	0	803.3	(771.4 , 825.8)	799 [784.4 , 833.3]	(728.8 , 838.4)
1000-1499	0	1271.9	(1256.1 , 1293.7)	1273 [1262.3 , 1285]	(1237.3 , 1321.4)

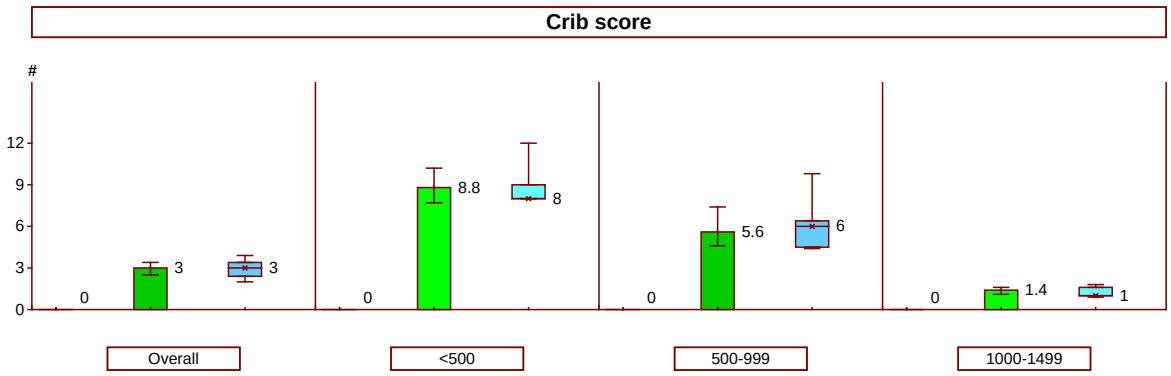
Mean: mean in gr of birth weight.
Global mean: mean of birth weight, all units are considered as a whole.
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution



6. CRIB score

	Crib score				
	NIC 0	REF: All NICs			
	Mean	Global mean	Ref: distribution over NICs		
			(95% CI)	P50[Q1-Q3]	(Range)
Overall	0	3	(2.5 , 3.4)	3 [2.4 , 3.4]	(2 , 3.9)
<500	0	8.8	(7.7 , 10.2)	8 [8 , 9]	(8 , 12)
500-999	0	5.6	(4.6 , 7.4)	6 [4.5 , 6.4]	(4.4 , 9.8)
1000-1499	0	1.4	(1.1 , 1.6)	1 [1 , 1.6]	(.9 , 1.8)

Mean: mean of CRIB score.
Global mean: mean of CRIB score, all units are considered as a whole.
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution



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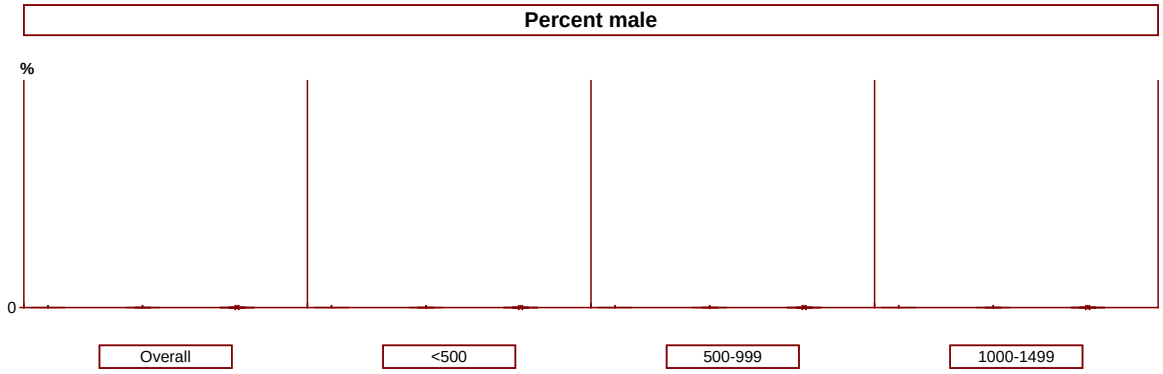
A. General Overview

7. Male sex: % of neonates

	Percent male						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

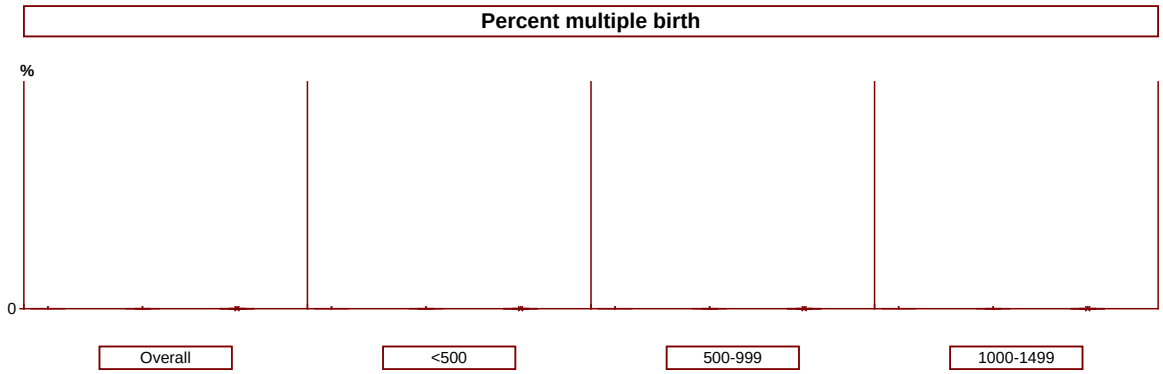
#: number of male patients under surveillance.
%: percent of male patients under surveillance over all patients under surveillance.



8. Multiple birth: % of neonates

	Percent multiple birth						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) concerned with multiple birth (MB).
%: percent of PUS with MB over all PUS.



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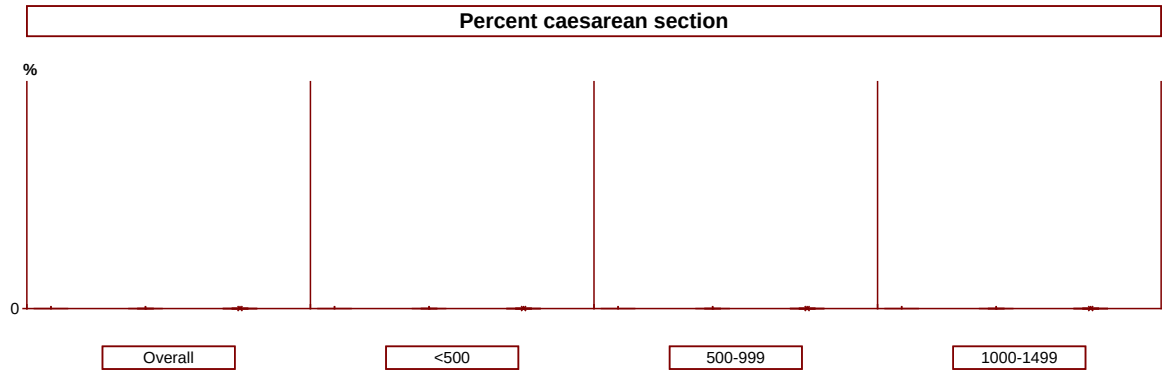
9. Caesarean section: % of neonates

	Percent caesarean section						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) concerned with Caesarean section (CS).
%: percent of PUS with CS over all PUS.



Neokiss Annual Report
A. General Overview

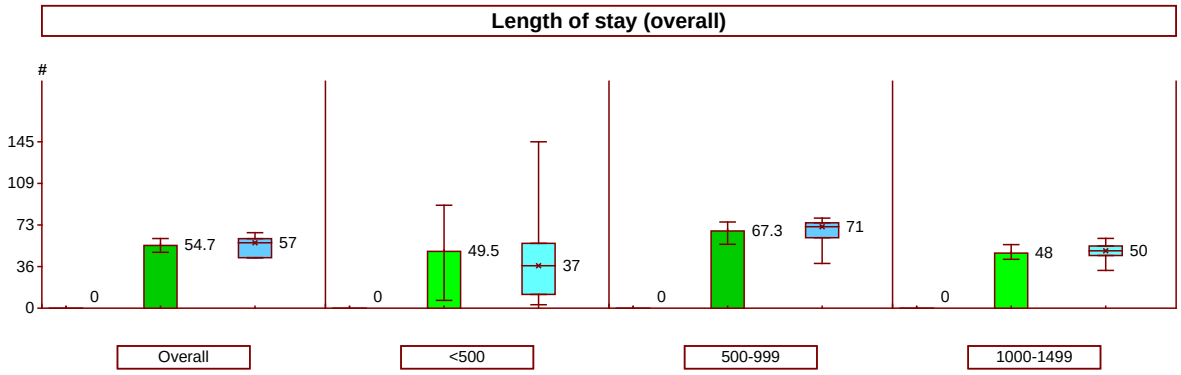
10. Patient days

10.1 Hospital days

10.1.a Overall

	Length of stay (overall)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	24113	441	54.7	(48.7 , 60.7)	57 [44 , 60.6]	(44 , 65.8)
<500		0	0	396	8	49.5	(6.8 , 89.7)	37 [12 , 56.5]	(3 , 145)
500-999		0	0	10235	152	67.3	(55.7 , 75.1)	71 [61.4 , 74.4]	(39 , 78.5)
1000-1499		0	0	13482	281	48	(42.6 , 55.4)	50 [45.9 , 54.2]	(32.9 , 60.8)

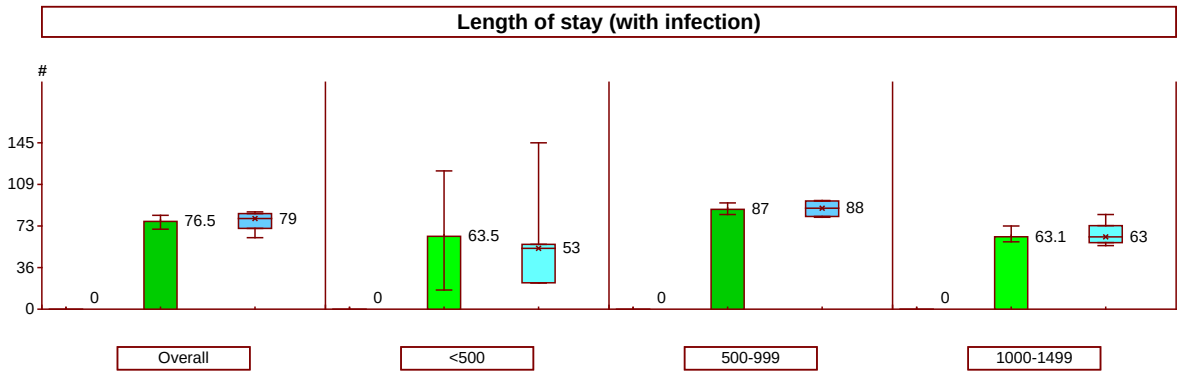
Num #: number of hospital days on patients under surveillance (PUS).
Den #: number of PUS.
Mean: mean of hospital days over PUS
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution



10.1.b With infection

	Length of stay (with infection)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	10102	132	76.5	(69.7 , 81.8)	79 [70.4 , 83.3]	(62.3 , 84.8)
<500		0	0	381	6	63.5	(16.7 , 120.5)	53 [23 , 56.5]	(23 , 145)
500-999		0	0	6440	74	87	(82.5 , 92.6)	88 [80.8 , 94.3]	(80.1 , 94.7)
1000-1499		0	0	3281	52	63.1	(58.7 , 72.5)	63 [58 , 72.8]	(55.4 , 82.5)

Num #: number of hospital days on patients under surveillance with infection (PUSI).
Den #: number of PUSI.
Mean: mean of hospital days of PUSI over PUSI
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution

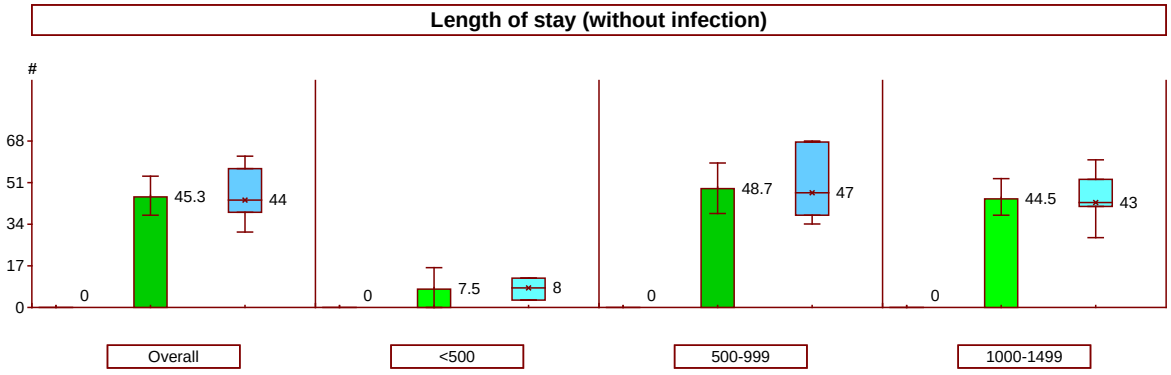


Neokiss Annual Report
A. General Overview

10.1.c Without infection

	Length of stay (without infection)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	14011	309	45.3	(37.8 , 53.8)	44 [39 , 56.9]	(30.9 , 62)
<500		0	0	15	2	7.5	(0 , 16.3)	8 [3 , 12]	(3 , 12)
500-999		0	0	3795	78	48.7	(38.5 , 59.2)	47 [37.8 , 67.8]	(34.2 , 68.2)
1000-1499		0	0	10201	229	44.5	(37.8 , 52.8)	43 [41.4 , 52.5]	(28.6 , 60.5)

Num #: number of hospital days on patients under surveillance without infection (PUSNI).
Den #: number of PUSNI.
Mean: mean of hospital days of PUSNI over PUSNI
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution



Neokiss Annual Report
A. General Overview

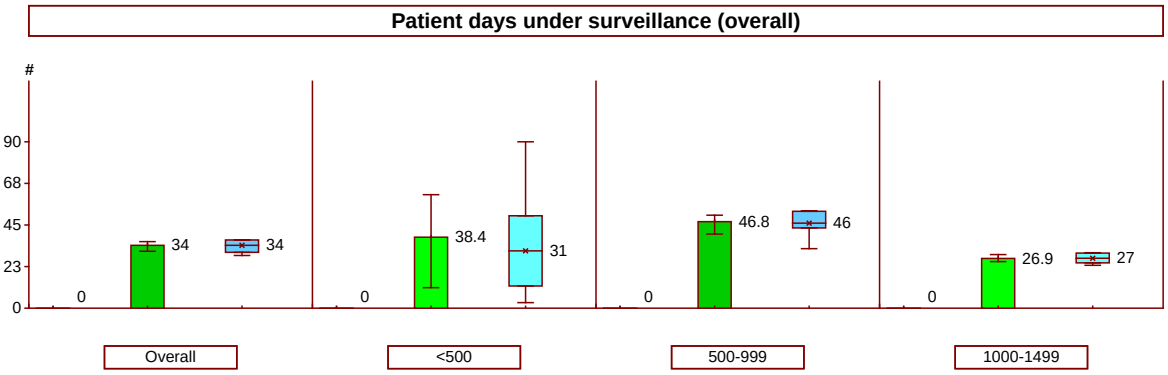
10.2 Surveillance days

10.2.a All patients

10.2.a.1 Overall

	Patient days under surveillance (overall)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	14990	441	34	(30.8 , 36)	34 [30.2 , 36.9]	(28.5 , 37)
<500		0	0	307	8	38.4	(11.1 , 61.4)	31 [12 , 50]	(3 , 90)
500-999		0	0	7111	152	46.8	(40.1 , 50.3)	46 [43.4 , 52.4]	(32.2 , 52.7)
1000-1499		0	0	7572	281	26.9	(25.2 , 29)	27 [24.5 , 29.8]	(23.2 , 30)

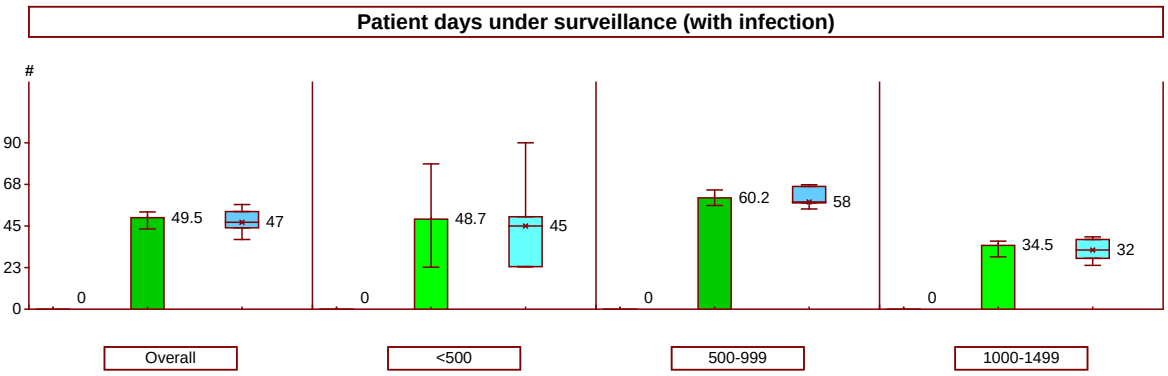
Num #: number of surveillance days on patients under surveillance (PUS).
Den #: number of PUS.
Mean: mean of surveillance days of PUS over PUS
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution



10.2.a.2 With infection

	Patient days under surveillance (with infection)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	6539	132	49.5	(43.4 , 52.6)	47 [44 , 52.8]	(37.7 , 56.6)
<500		0	0	292	6	48.7	(22.7 , 78.6)	45 [23 , 50]	(23 , 90)
500-999		0	0	4455	74	60.2	(56.1 , 64.5)	58 [57.5 , 66.4]	(54.2 , 67.3)
1000-1499		0	0	1792	52	34.5	(28.3 , 36.8)	32 [27.5 , 37.7]	(23.7 , 39.1)

Num #: number of surveillance days on patients under surveillance with infection (PUSI).
Den #: number of PUSI.
Mean: mean of surveillance days of PUSI over PUSI
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution

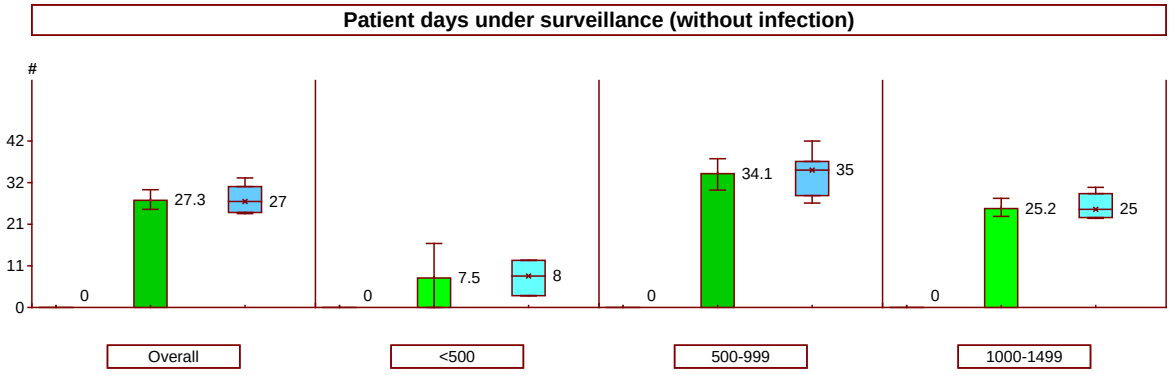


Neokiss Annual Report
A. General Overview

10.2.a.3 Without infection

	Patient days under surveillance (without infection)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	8451	309	27.3	(25 , 30)	27 [24.2 , 30.8]	(23.9 , 33)
<500		0	0	15	2	7.5	(0 , 16.3)	8 [3 , 12]	(3 , 12)
500-999		0	0	2656	78	34.1	(29.9 , 37.9)	35 [28.5 , 37.2]	(26.6 , 42.4)
1000-1499		0	0	5780	229	25.2	(23.2 , 27.8)	25 [22.9 , 29]	(22.7 , 30.6)

Num #: number of surveillance days on patients under surveillance without infection (PUSNI).
Den #: number of PUSNI.
Mean: mean of surveillance days of PUSNI over PUSNI
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution



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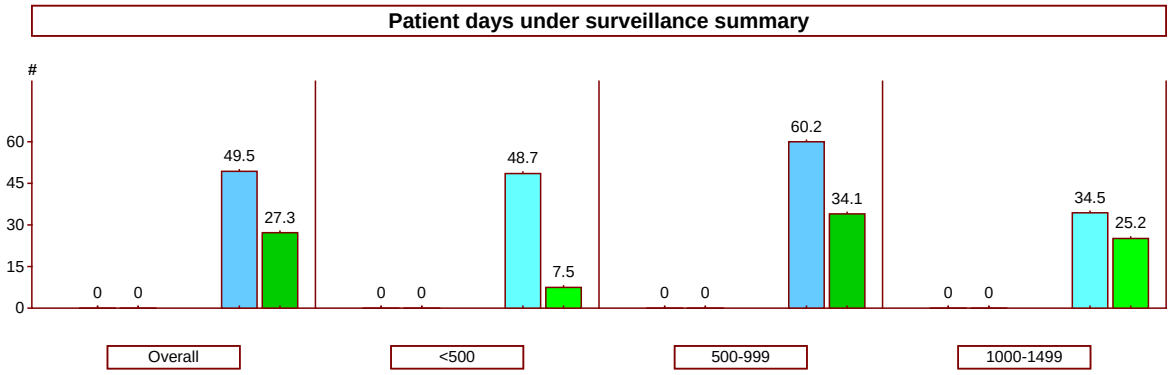
10.2.a.4 Surveillance days summary

	Patient days under surveillance summary			
	NIC 0		REF: All NICs	
	Inf.	No Inf.	Inf.	No Inf.
Overall	0	0	49.5	27.3
<500	0	0	48.7	7.5
500-999	0	0	60.2	34.1
1000-1499	0	0	34.5	25.2

Inf.: Mean of surveillance days of patient under suvveillance (PUS) with Infection.
No Inf.: Mean of surveillance days of patient under suvveillance (PUS) without Infection.

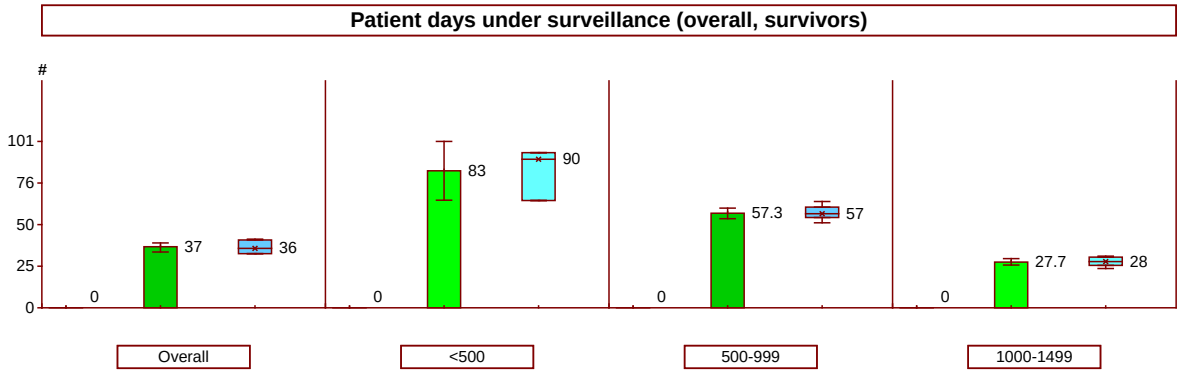


10.2.b Survivors

10.2.b.1 Overall

	Patient days under surveillance (overall, survivors)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	14459	391	37	(33.8 , 39.3)	36 [32.8 , 41.1]	(32.8 , 41.6)
<500		0	0	249	3	83	(65.2 , 100.8)	90 [65 , 94]	(65 , 94)
500-999		0	0	6702	117	57.3	(54 , 60.4)	57 [54.7 , 61]	(51.5 , 64.4)
1000-1499		0	0	7508	271	27.7	(25.9 , 29.8)	28 [25.7 , 30.7]	(23.8 , 31.3)

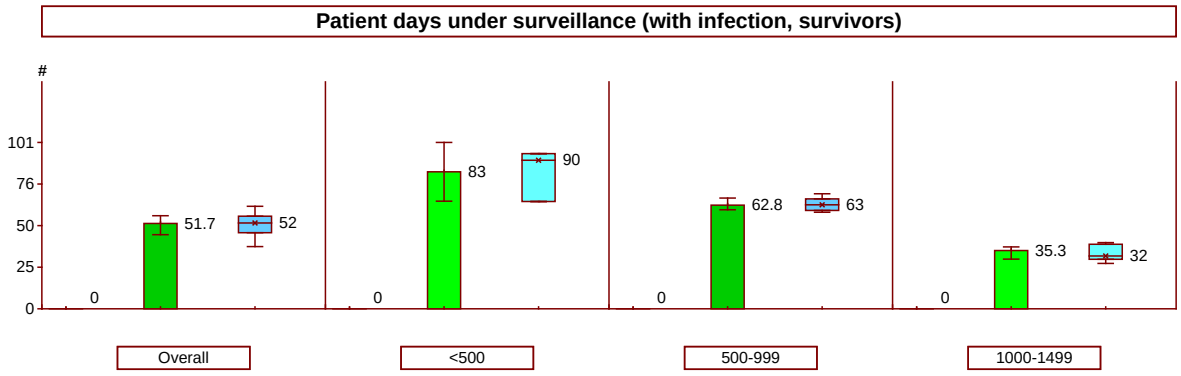
Num #: number of surveillance days on patients under surveillance (PUS).
Den #: number of PUS.
Mean: mean of surveillance days of PUS over PUS
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution



10.2.b.2 With infection

	Patient days under surveillance (with infection, survivors)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	6158	119	51.7	(44.9 , 56.4)	52 [46.1 , 56.1]	(37.7 , 62.1)
<500		0	0	249	3	83	(65.2 , 100.8)	90 [65 , 94]	(65 , 94)
500-999		0	0	4146	66	62.8	(60 , 67.1)	63 [59.6 , 66.6]	(58.5 , 69.7)
1000-1499		0	0	1763	50	35.3	(30.1 , 37.5)	32 [30 , 39.1]	(27.5 , 40.1)

Num #: number of surveillance days on patients under surveillance with infection (PUSI).
Den #: number of PUSI.
Mean: mean of surveillance days of PUSI over PUSI
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution



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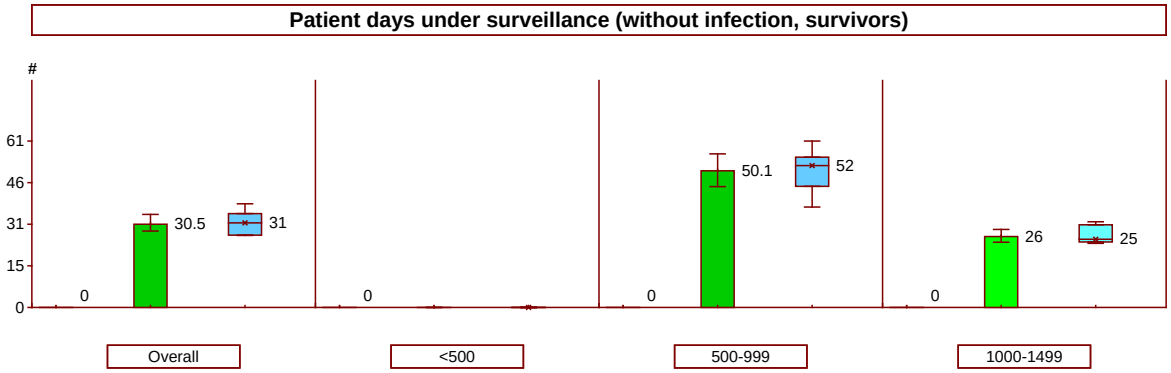
10.2.b.3 Without infection

	Patient days under surveillance (without infection, survivors)								
	NIC 0			REF: All NICs					
	Num #	Den #	Mean	Num #	Den #	Mean	Ref: distribution over NICs		
							(95% CI)	P50[Q1-Q3]	(Range)
Overall		0	0	8301	272	30.5	(28 , 34.1)	31 [26.5 , 34.4]	(26.4 , 38)
<500		0	0		0		(,)	[,]	(,)
500-999		0	0	2556	51	50.1	(44.3 , 56.3)	52 [44.4 , 55.1]	(36.8 , 61)
1000-1499		0	0	5745	221	26	(23.9 , 28.6)	25 [24 , 30.3]	(23.5 , 31.4)

Num #: number of surveillance days on patients under surveillance without infection (PUSNI).
Den #: number of PUSNI.
Mean: mean of surveillance days of PUSNI over PUSNI
Remark: When NICU has no patient in the corresponding stratified weight, it will not participate on the NIC distribution

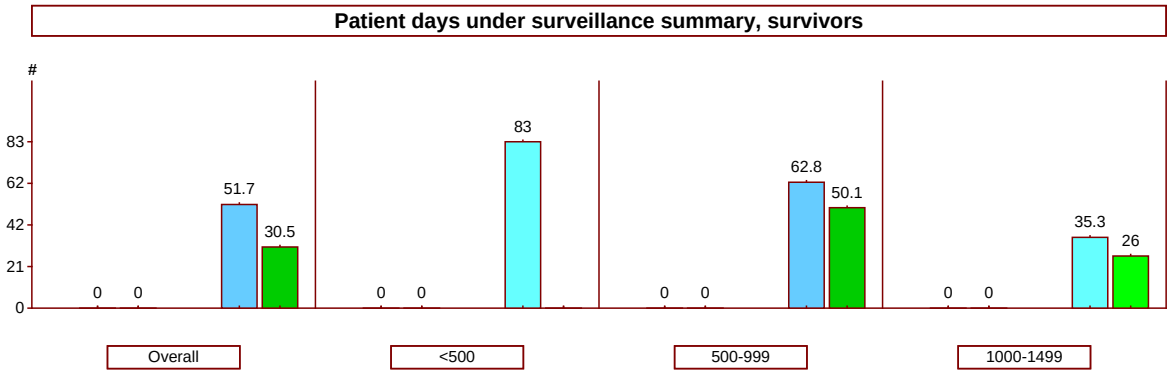


Neokiss Annual Report
A. General Overview

10.2.b.4 Surveillance days summary

	Patient days under surveillance summary, survivors			
	NIC 0		REF: All NICs	
	Inf.	No Inf.	Inf.	No Inf.
Overall	0	0	51.7	30.5
<500	0	0	83	
500-999	0	0	62.8	50.1
1000-1499	0	0	35.3	26

Inf.: Mean of surveillance days of patient under suvveillance (PUS) with Infection.
No Inf.: Mean of surveillance days of patient under suvveillance (PUS) without Infection.



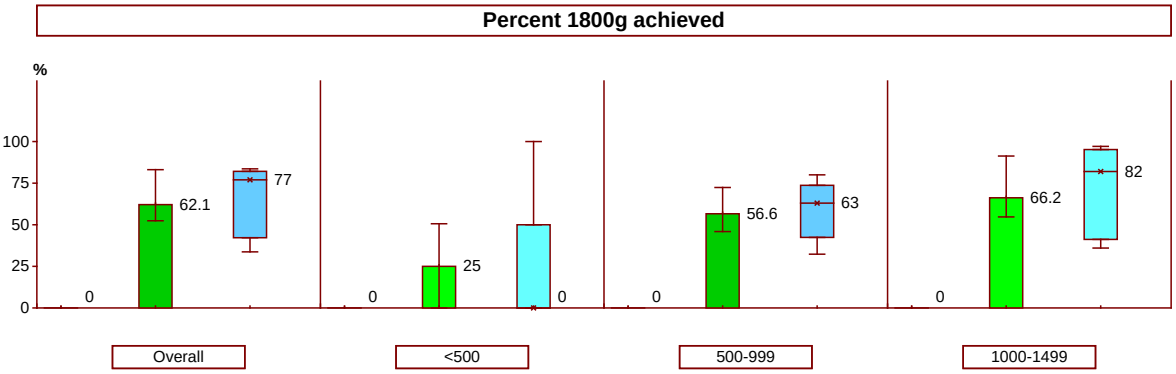
Neokiss Annual Report
A. General Overview

11. Status at end of surveillance:

11.1 1800g achieved

	Percent 1800g achieved						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
Overall	0	0	274	62.1	(52.4 , 83.1)	77 [42.2 , 82.1]	(33.7 , 83.6)
<500	0	0	2	25	(0 , 50.6)	0 [0 , 50]	(0 , 100)
500-999	0	0	86	56.6	(45.9 , 72.4)	63 [42.4 , 73.7]	(32.3 , 80)
1000-1499	0	0	186	66.2	(54.7 , 91.3)	82 [41.2 , 95.2]	(36 , 97.1)

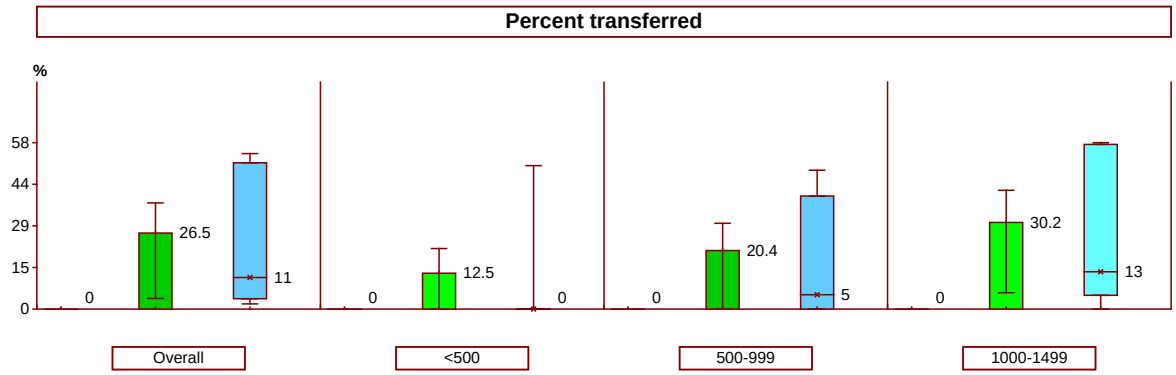
#: number of patients under surveillance (PUS) 1800g achieved.
%: percent of PUS 1800g achieved over total PUS.



11.2 Transferred

	Percent transferred						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
Overall	0	0	117	26.5	(3.7 , 37)	11 [3.6 , 51]	(1.8 , 54.2)
<500	0	0	1	12.5	(0 , 21.1)	0 [0 , 0]	(0 , 50)
500-999	0	0	31	20.4	(.1 , 29.9)	5 [0 , 39.4]	(0 , 48.4)
1000-1499	0	0	85	30.2	(5.7 , 41.4)	13 [4.8 , 57.4]	(0 , 58)

#: number of patients under surveillance (PUS) transferred.
%: percent of PUS transferred over total PUS.

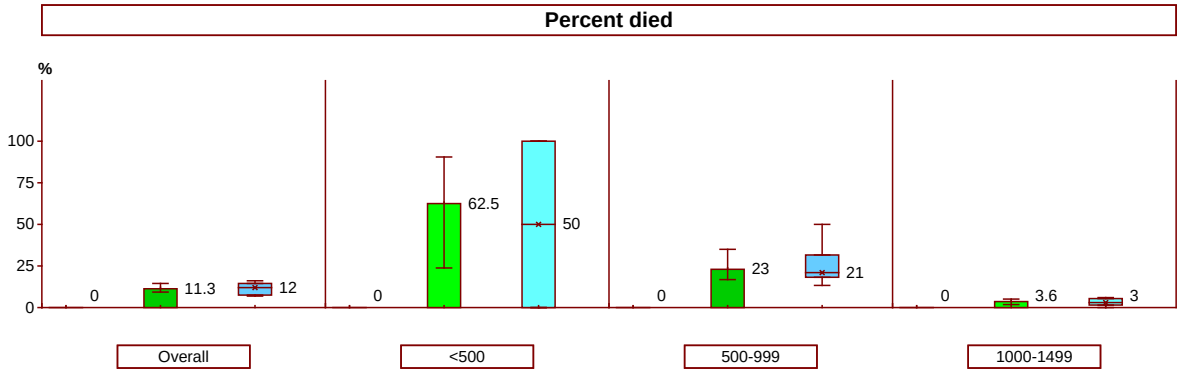


Neokiss Annual Report
A. General Overview

11.3 Death

	Percent died						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
Overall	0	0	50	11.3	(9.3 , 14.5)	12 [7.5 , 14.5]	(6.9 , 16.1)
<500	0	0	5	62.5	(23.8 , 90.5)	50 [0 , 100]	(0 , 100)
500-999	0	0	35	23	(16.8 , 35)	21 [18.2 , 31.6]	(13.3 , 50)
1000-1499	0	0	10	3.6	(1.8 , 5.1)	3 [1.5 , 5.4]	(0 , 6)

#: number of patients under surveillance (PUS) died.
%: percent of PUS died over PUS.



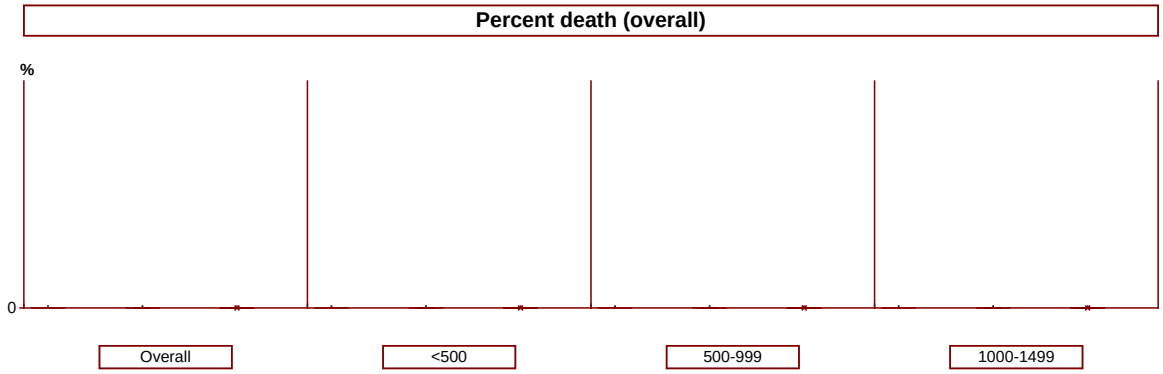
Neokiss Annual Report
A. General Overview

12. Mortality

12.1 Overall

	Percent death (overall)						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

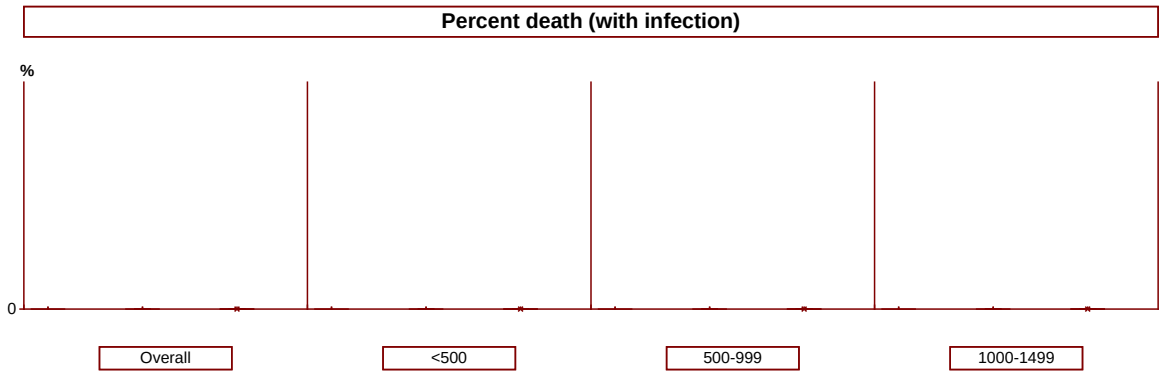
#: number of patients under surveillance (PUS) died.
%: percent of PUS died over PUS.



12.2 With infection

	Percent death (with infection)						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

#: number of patients under surveillance died (PUSD) with infection (PUSDI).
%: percent of PUSDI died over PUSD.

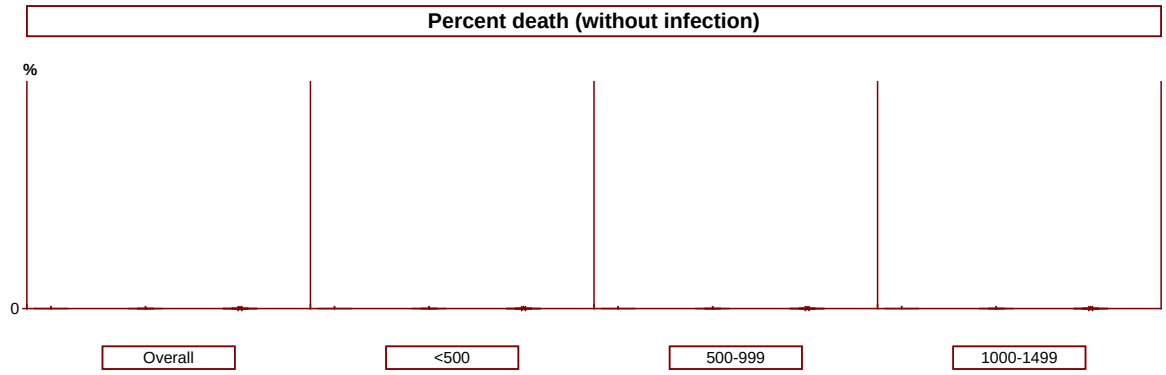


Neokiss Annual Report
A. General Overview

12.3 Without infection

	Percent death (without infection)						
	NIC 0		Ref:				
	#	%	#	%	Distribution over NICs		
					(95% CI)	P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

#: number of patients under surveillance died (PUSD) without infection (PUSDNI).
%: percent of PUSDNI died over PUSD.

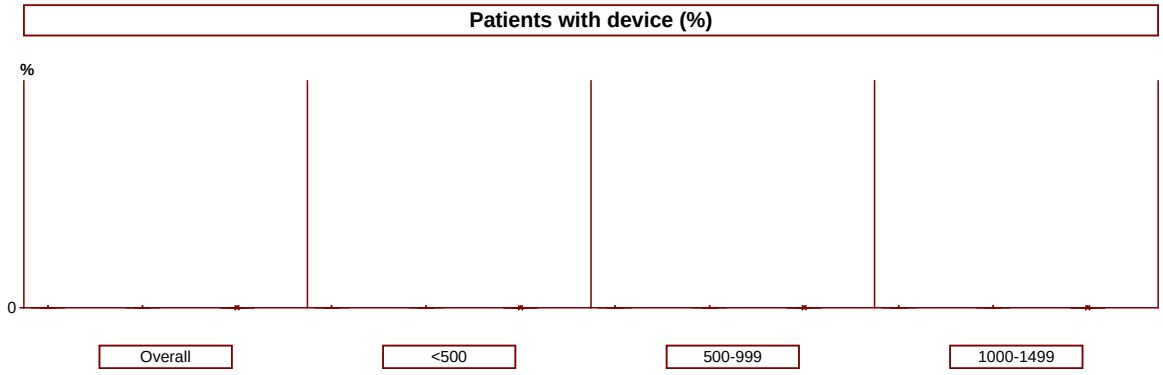


Neokiss Annual Report
B. Device utilisation

1. Ventilation (Intubation+CPAP)

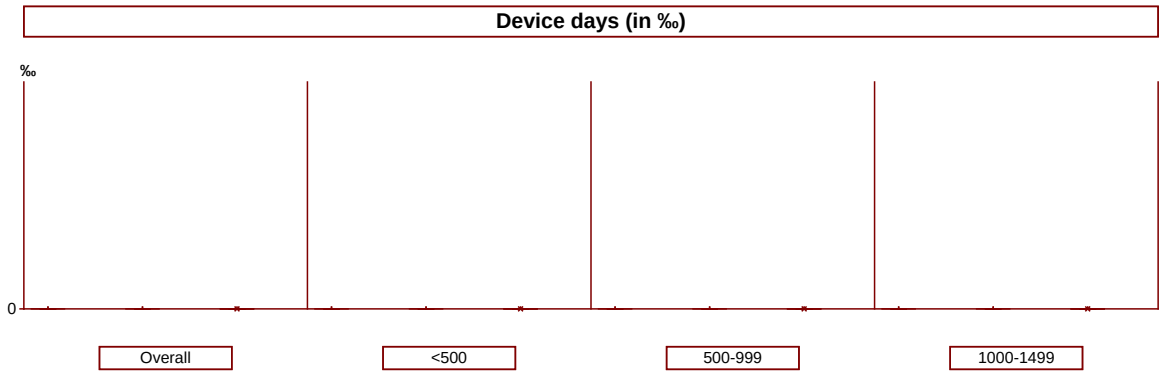
	Patients with device									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with ventilation (PUSV).
Total: number of PUS.
%: percent of PUSV over PUS.



	Device days									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of days of patients under surveillance (PUS) with ventilation (PUSV).
Total: total of surveillance days of PUS.
‰: per mille PUSV days over PUS days.

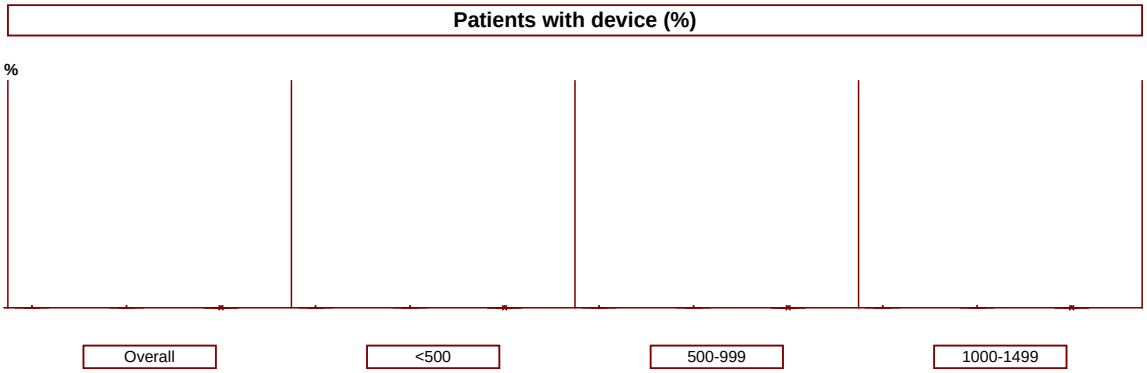


Neokiss Annual Report
B. Device utilisation

2. Intubation

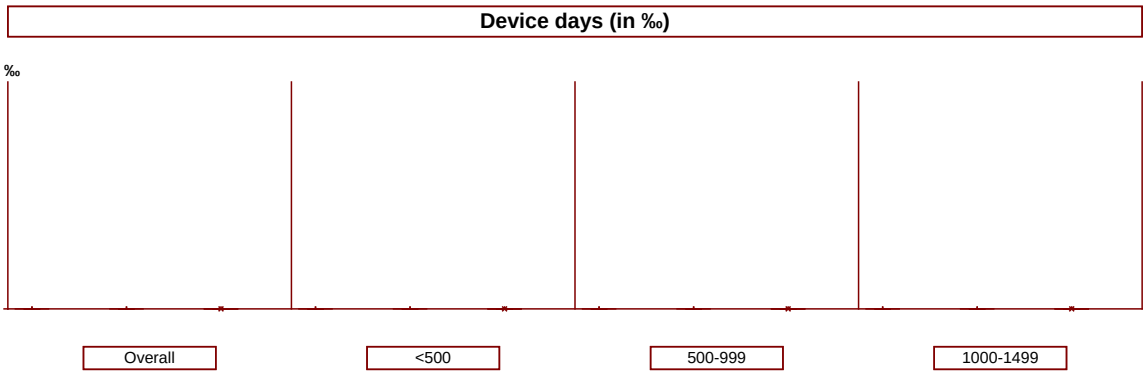
	Patients with device									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with intubation (PUSI).
Total: number of PUS.
%: percent of PUSI over PUS.



	Device days									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of days of patients under surveillance (PUS) with intubation (PUSI).
Total: total of surveillance days of PUS.
‰: per mille PUSI days over PUS days.

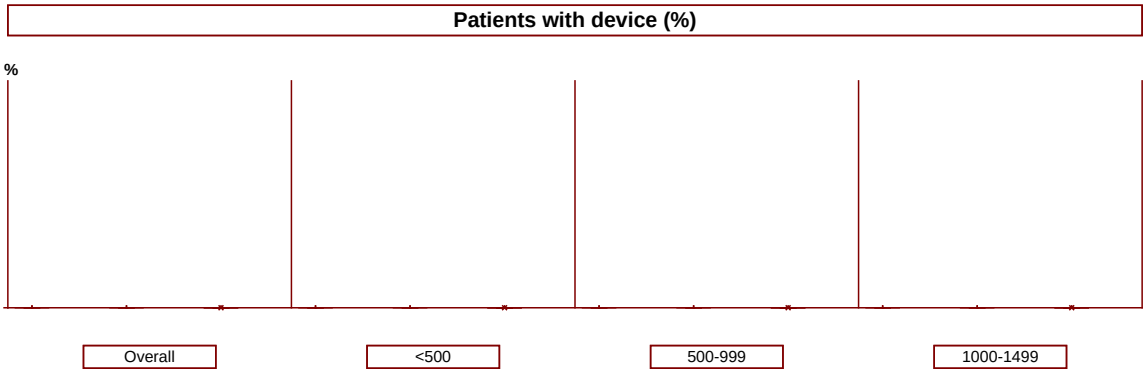


Neokiss Annual Report
B. Device utilisation

3. CPAP

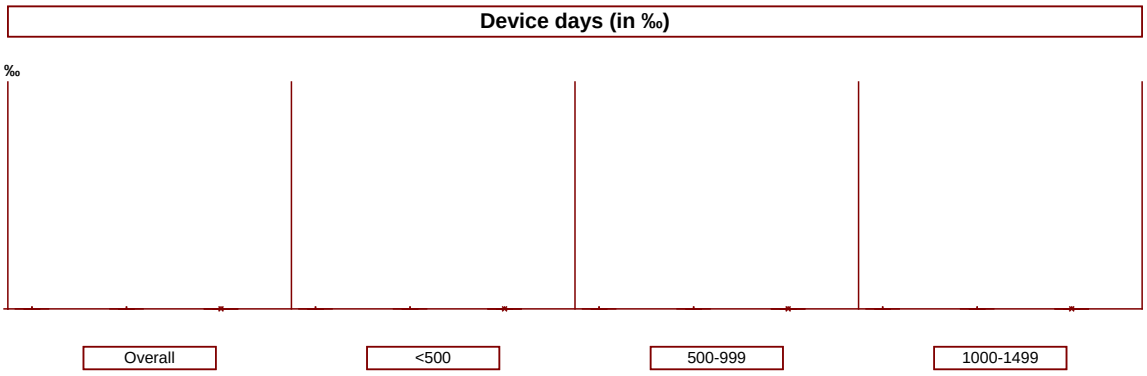
	Patients with device									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with CPAP (PUSCPAP).
Total: number of PUS.
%: percent of PUSCPAP over PUS.



	Device days									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of days of patients under surveillance (PUS) with CPAP (PUSCPAP).
Total: total of surveillance days of PUS.
‰: per mille PUSCPAP days over PUS days.

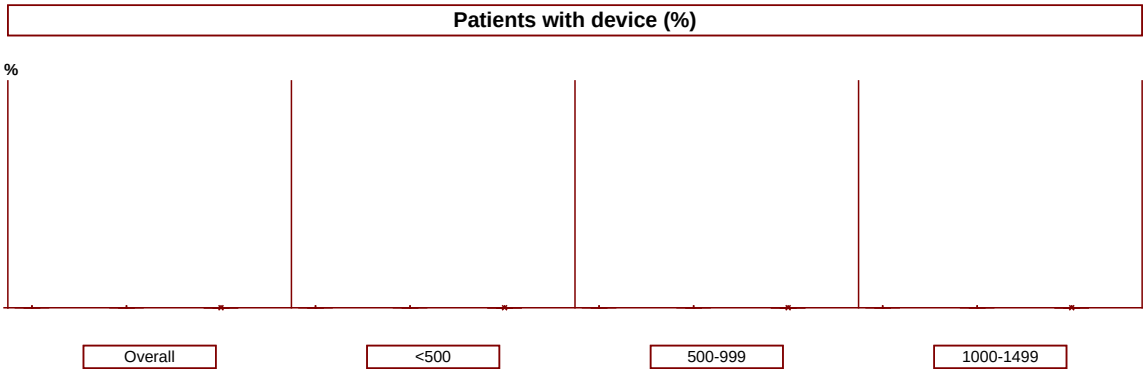


Neokiss Annual Report
B. Device utilisation

4. Catheter (CVC+PVC)

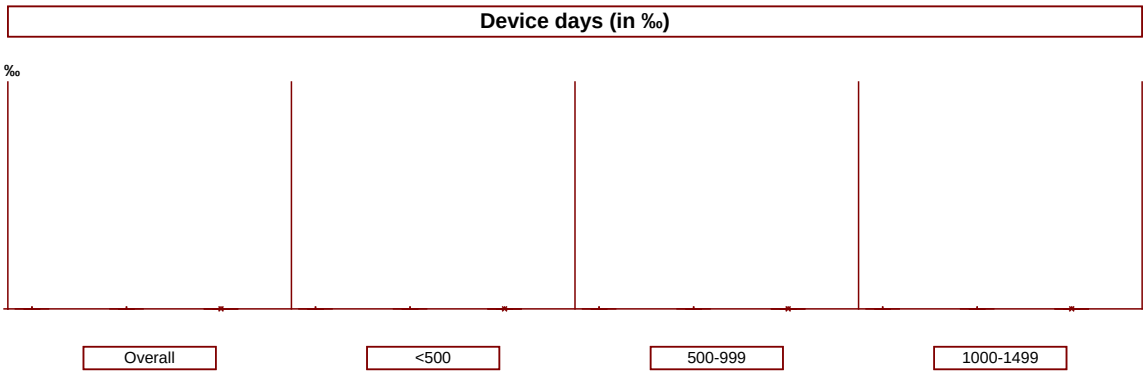
	Patients with device									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with catheter (PUSC).
Total: number of PUS.
%: percent of PUSC over PUS.



	Device days									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of days of patients under surveillance (PUS) with catheter (PUSC).
Total: total of surveillance days of PUS.
‰: per mille PUSC days over PUS days.

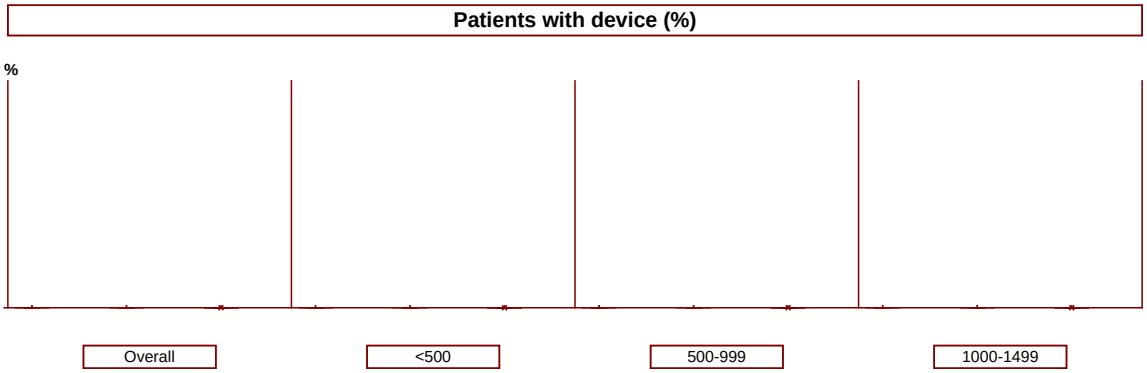


Neokiss Annual Report
B. Device utilisation

5. CVC

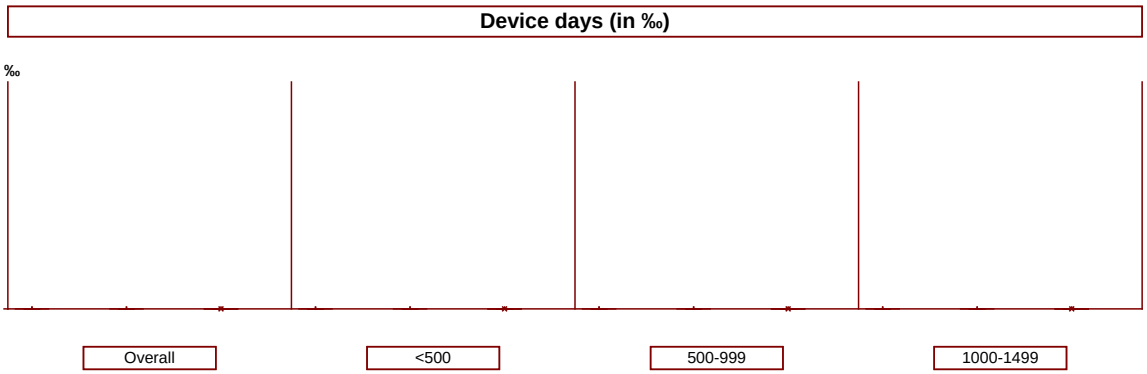
	Patients with device									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with CVC (PUSCVC).
Total: number of PUS.
%: percent of PUSCVC over PUS.



	Device days									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of days of patients under surveillance (PUS) with CVC (PUSCVC).
Total: total of surveillance days of PUS.
‰: per mille PUSCVC days over PUS days.

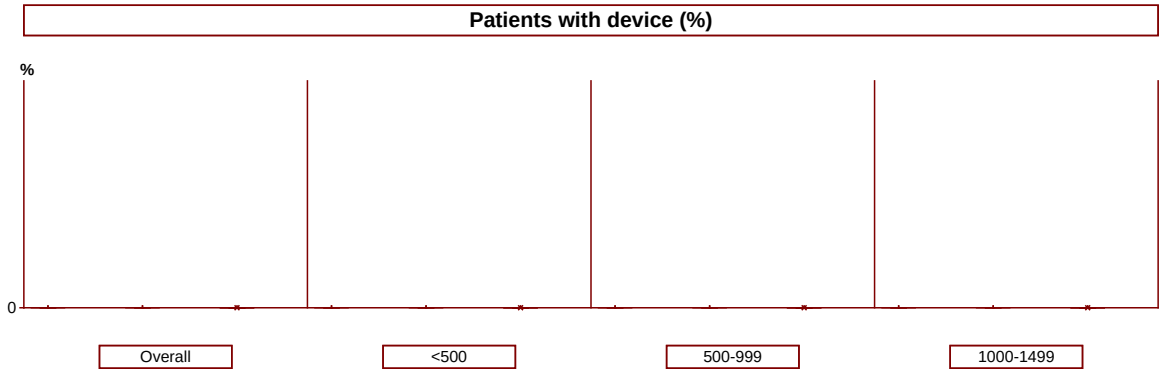


Neokiss Annual Report
B. Device utilisation

6. PVC

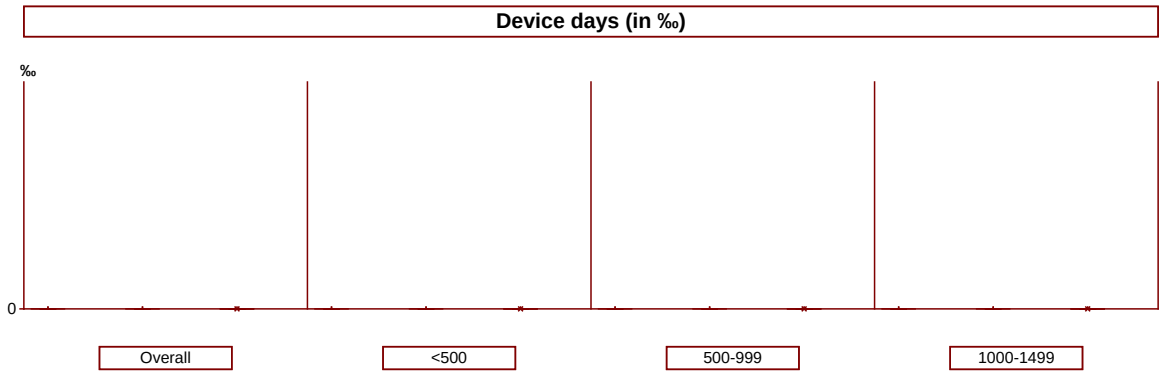
	Patients with device									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with PVC (PUSPVC).
Total: number of PUS.
%: percent of PUSPVC over PUS.



	Device days									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of days of patients under surveillance (PUS) with PVC (PUSPVC).
Total: total of surveillance days of PUS.
‰: per mille PUSPVC days over PUS days.



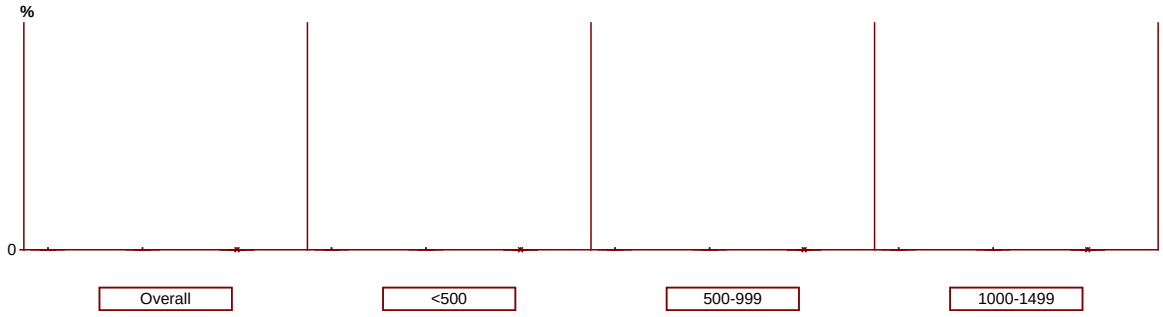
Neokiss Annual Report
B. Device utilisation

7. Antibiotic use

	Patients with antibiotic									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with antibiotic (PUSA).
Total: number of PUS.
%: percent of PUSA over PUS.

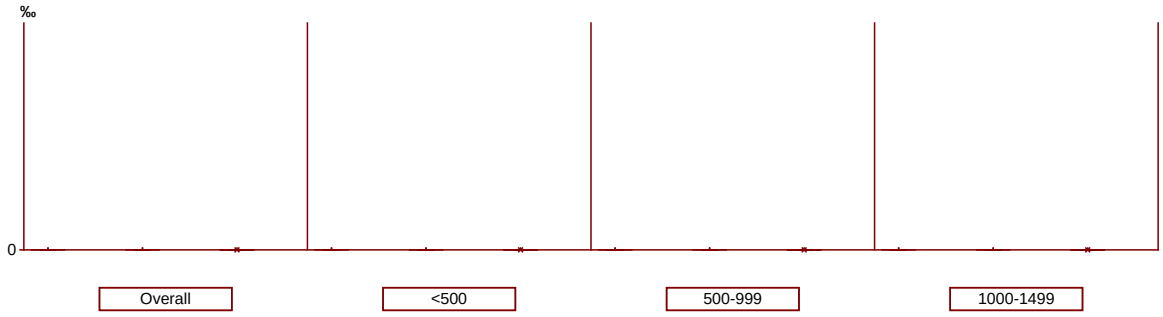
Patients with antibiotic (%)



	Antibiotic days									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of days of patients under surveillance (PUS) with antibiotic (PUSA).
Total: total of surveillance days of PUS.
‰: per mille PUSA days over PUS days.

Antibiotic utilization days (in ‰)

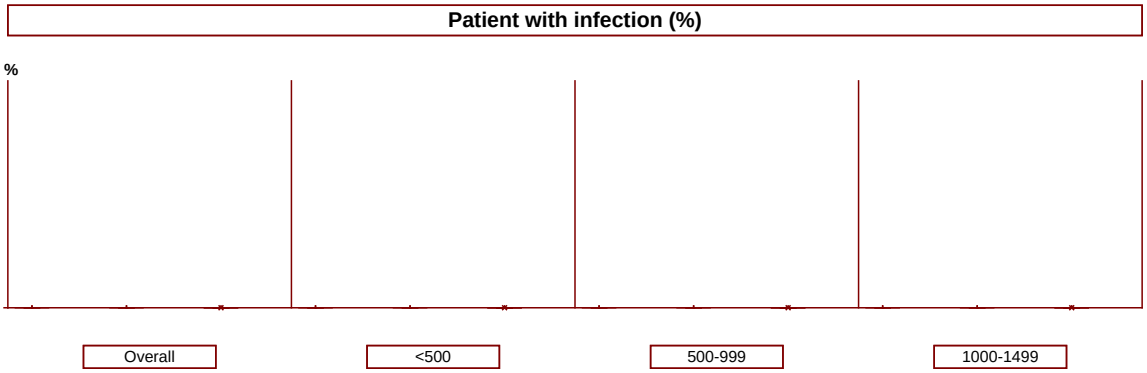


Neokiss Annual Report
C. Infection Incidence

1. BSI

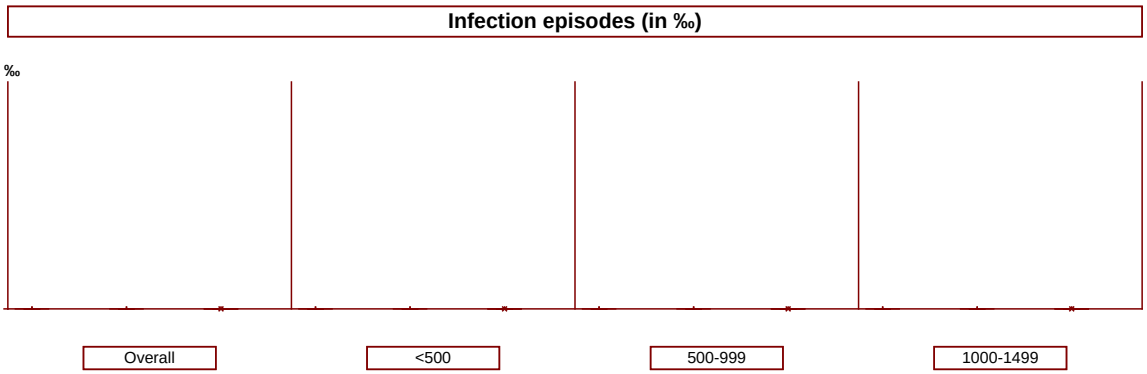
	Patient with infection									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with BSI (PUSBSI).
Total: number of PUS.
%: percent of PUSBSI over PUS.



	Infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with BSI (PUSBSI).
Total: total of surveillance days of PUS.
‰: per mille number of BSI episodes over PUS days.

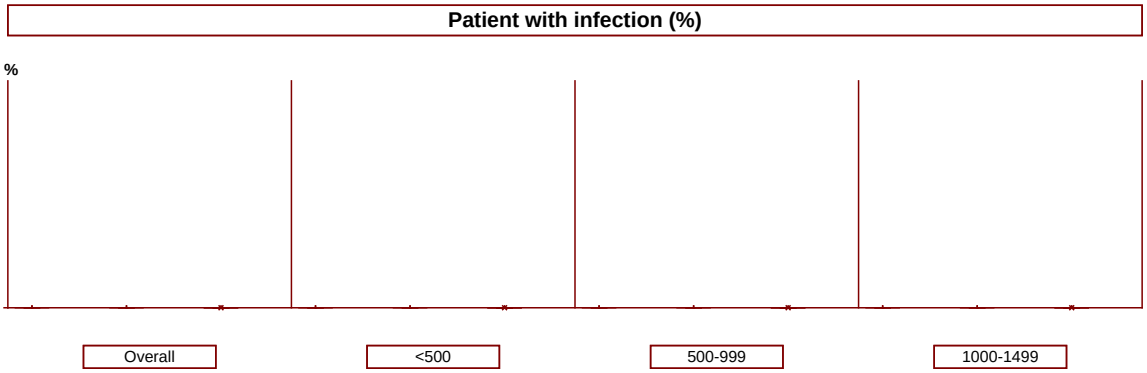


Neokiss Annual Report
C. Infection Incidence

2. Pneumonia

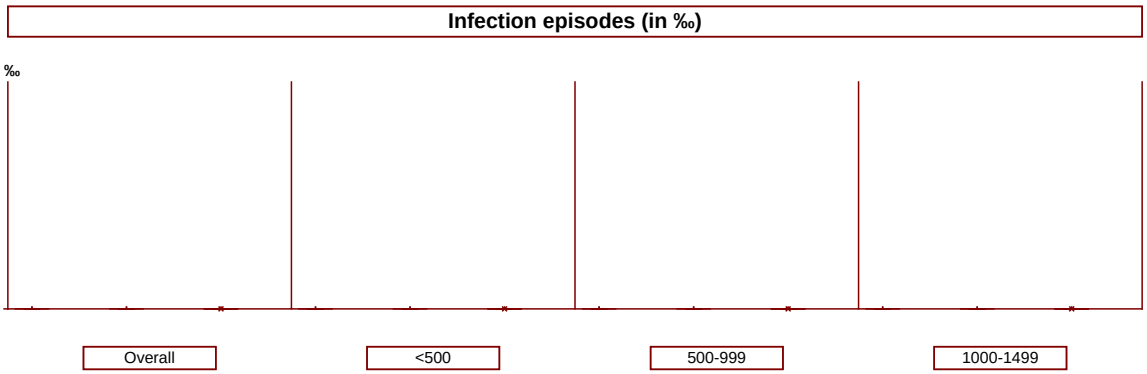
	Patient with infection									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with pneumonia (PUSPNE).
Total: number of PUS.
%: percent of PUSPNE over PUS.



	Infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with pneumonia (PUSPNE).
Total: total of surveillance days of PUS.
‰: per mille number of pneumonia episodes over PUS days.



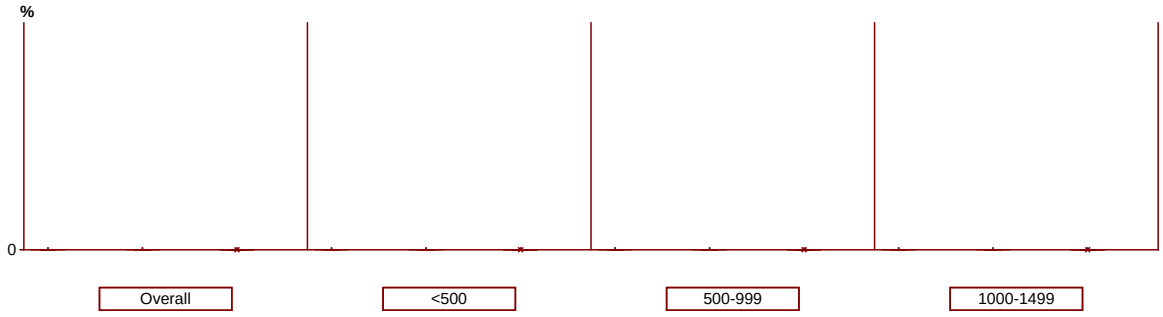
Neokiss Annual Report
C. Infection Incidence

3. BSI+PNE

	Patient with infection									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with BSI or pneumonia (PUSBSIPNE).
Total: number of PUS.
%: percent of PUSBSIPNE over PUS.

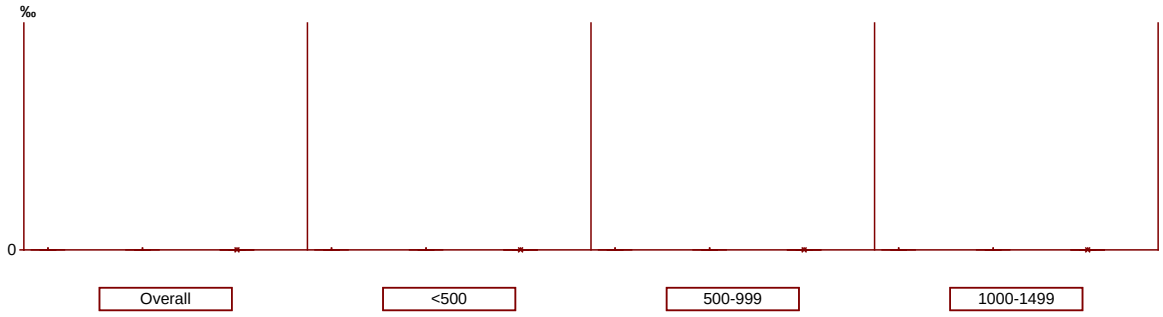
Patient with infection (%)



	Infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with BSI or pneumonia (PUSBSIPNE).
Total: total of surveillance days of PUS.
‰: per mille number of BSI or pneumonia episodes over PUS days.

Infection episodes (in ‰)



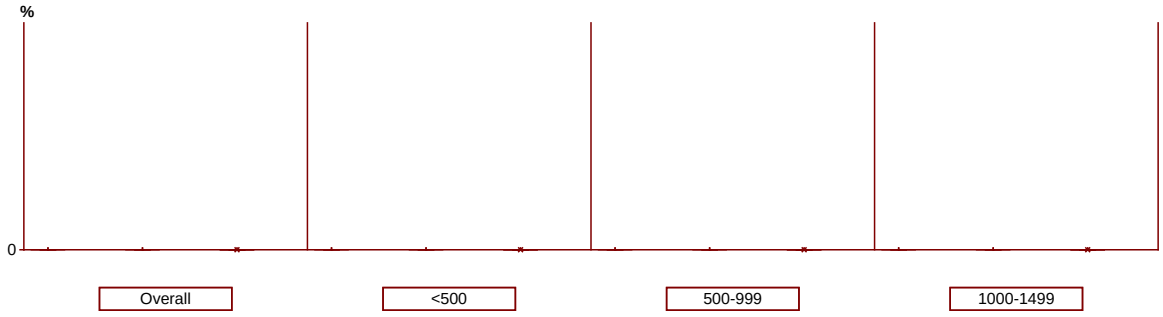
Neokiss Annual Report
C. Infection Incidence

4. NEC

	Patient with infection									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with NEC (PUSNEC).
Total: number of PUS.
%: percent of PUSNEC over PUS.

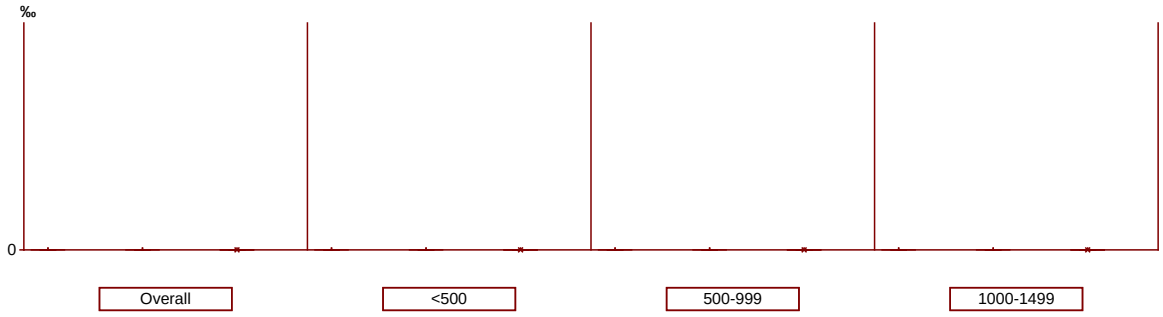
Patient with infection (%)



	Infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with NEC (PUSNEC).
Total: total of surveillance days of PUS.
‰: per mille number of NEC episodes over PUS days.

Infection episodes (in ‰)

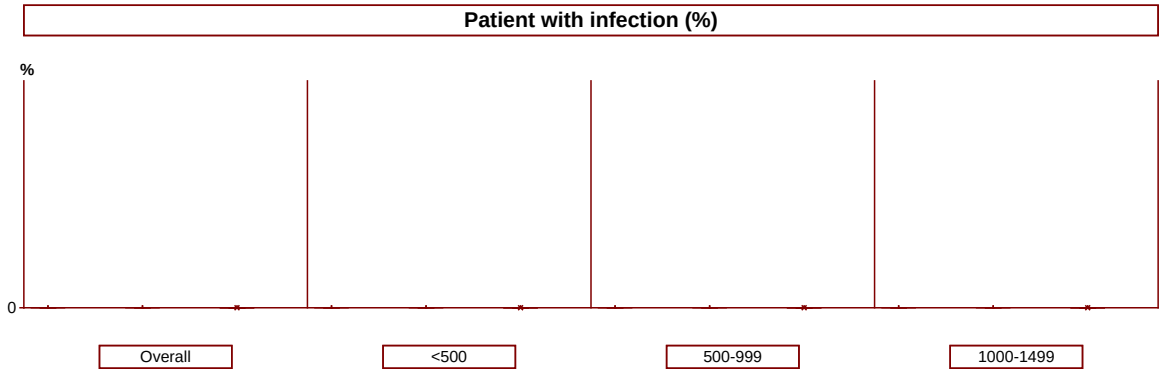


Neokiss Annual Report
C. Infection Incidence

5. BSI+PNE+NEC

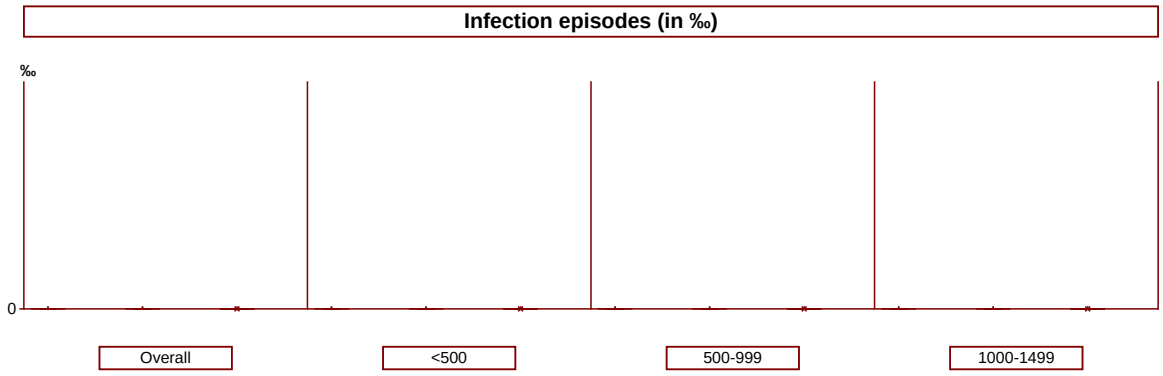
	Patient with infection									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with BSI or pneumonia or NEC (PUSBSIPNENEC).
Total: number of PUS.
%: percent of PUSBSIPNENEC over PUS.



	Infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

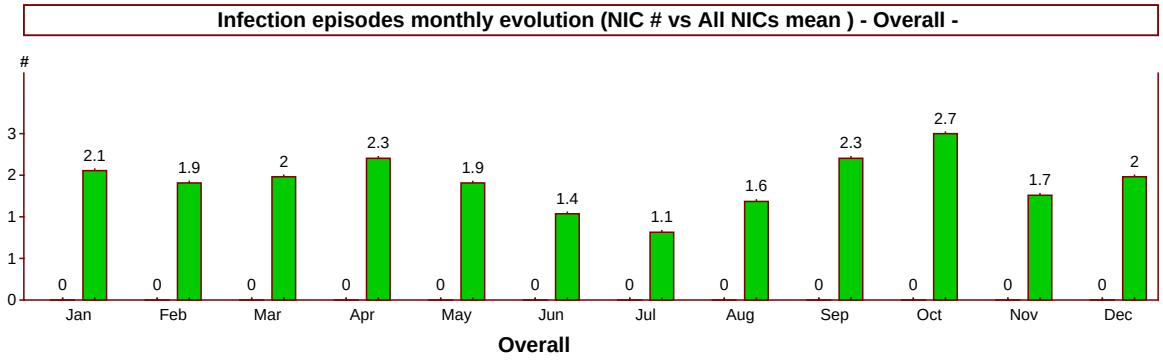
#: number of episodes of patients under surveillance (PUS) with BSI or pneumonia or NEC (PUSBSIPNENEC).
Total: total of surveillance days of PUS.
‰: per mille number of BSI or pneumonia or NEC episodes over PUS days.

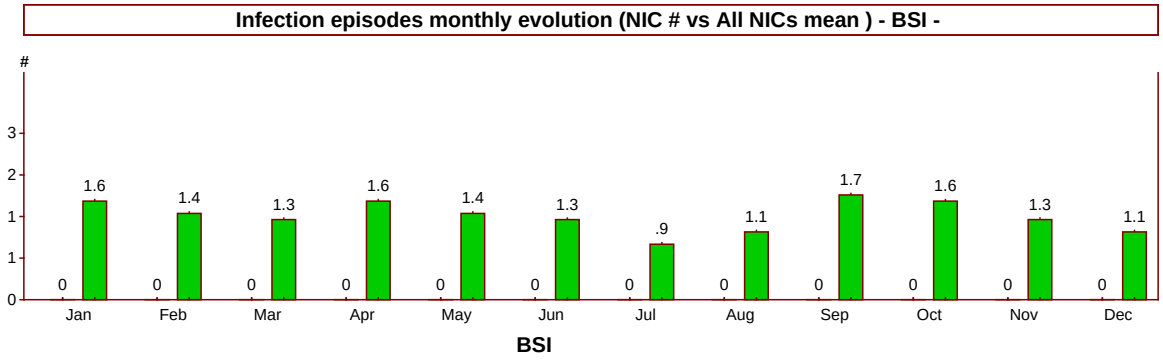


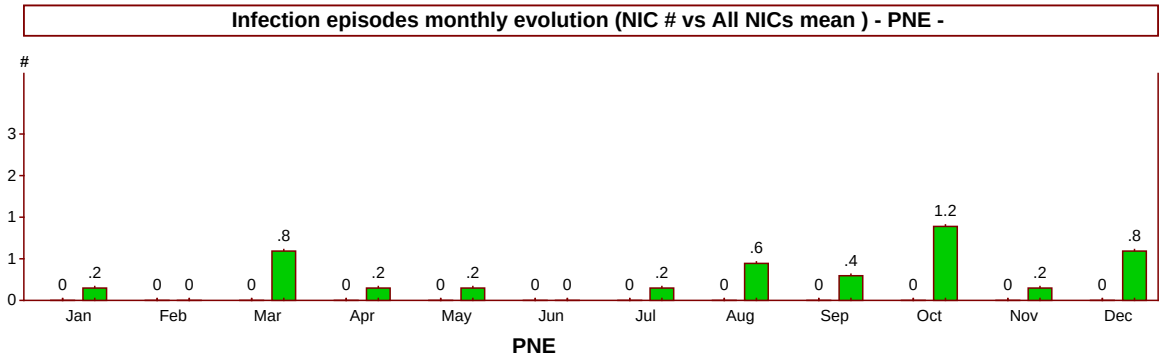
Neokiss Annual Report
C. Infection Incidence

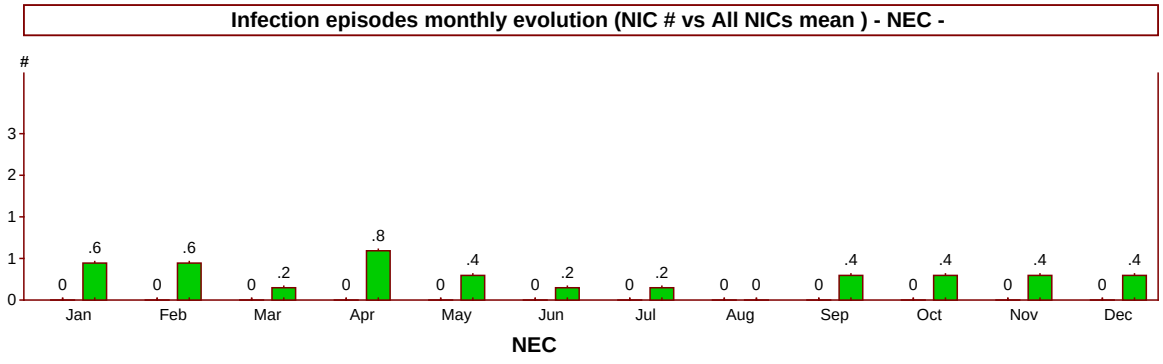
6. Infection evolution

	Infection episodes monthly evolution (NIC # vs All NICs mean)																							
	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Overall	0	2.1	0	1.9	0	2	0	2.3	0	1.9	0	1.4	0	1.1	0	1.6	0	2.3	0	2.7	0	1.7	0	2
BSI	0	1.6	0	1.4	0	1.3	0	1.6	0	1.4	0	1.3	0	.9	0	1.1	0	1.7	0	1.6	0	1.3	0	1.1
PNE	0	.2	0	0	0	.8	0	.2	0	.2	0	0	0	.2	0	.6	0	.4	0	1.2	0	.2	0	.8
NEC	0	.6	0	.6	0	.2	0	.8	0	.4	0	.2	0	.2	0	0	0	.4	0	.4	0	.4	0	.4









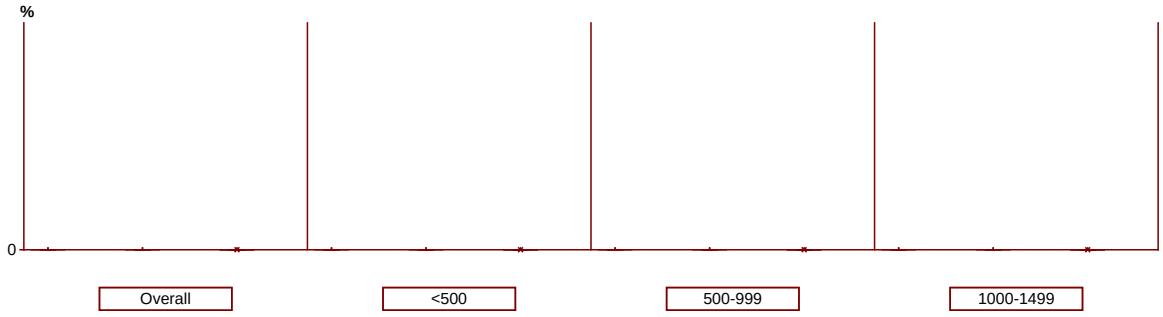
Neokiss Annual Report
D. Device-associated Infection Incidence

1. BSI catheter-associated

	Patient with device-associated infections									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with BSI catheter associated (BSI-CATH).
Total: number of PUS with catheter.
%: percent of PUS BSI-CATH over PUS with catheter.

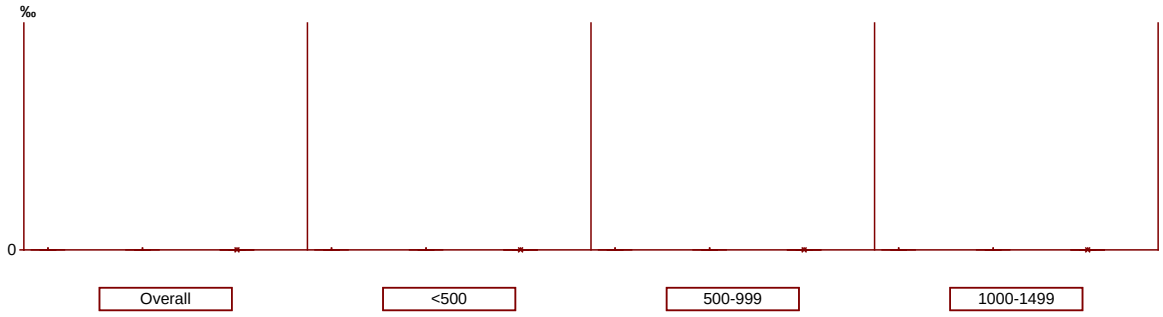
Patient with catheter-associated infections (%)



	Device associated infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with BSI catheter associated (BSI-CATH).
Total: total of surveillance days of PUS with catheter.
‰: per mille number of BSI Catheter associated episodes over PUS catheter days.

Catheter-associated infection episodes (in ‰)



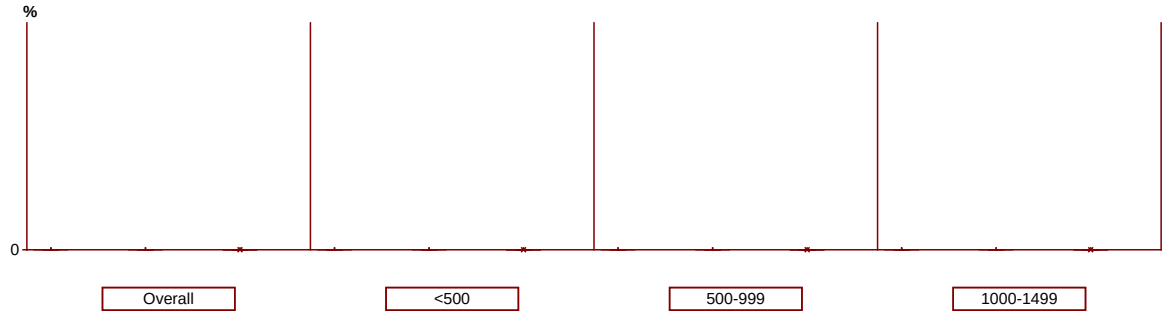
Neokiss Annual Report
D. Device-associated Infection Incidence

2. BSI CVC-associated

	Patient with device-associated infections									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with BSI CVC associated (BSI-CVC).
Total: number of PUS with CVC.
%: percent of PUS BSI-CVC over PUS with CVC.

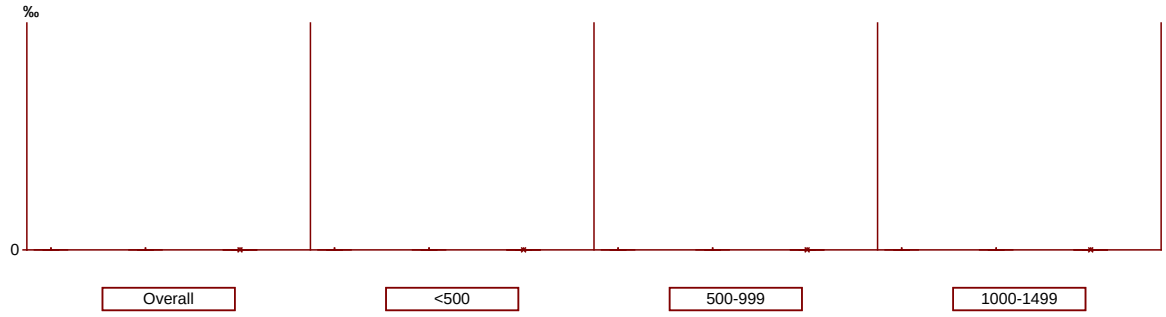
Patient with CVC-associated infections (%)



	Device associated infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with BSI CVC associated .
Total: total of surveillance days of PUS with CVC.
‰: per mille number of BSI CVC associated episodes over PUS CVC days.

CVC-associated infection episodes (in ‰)



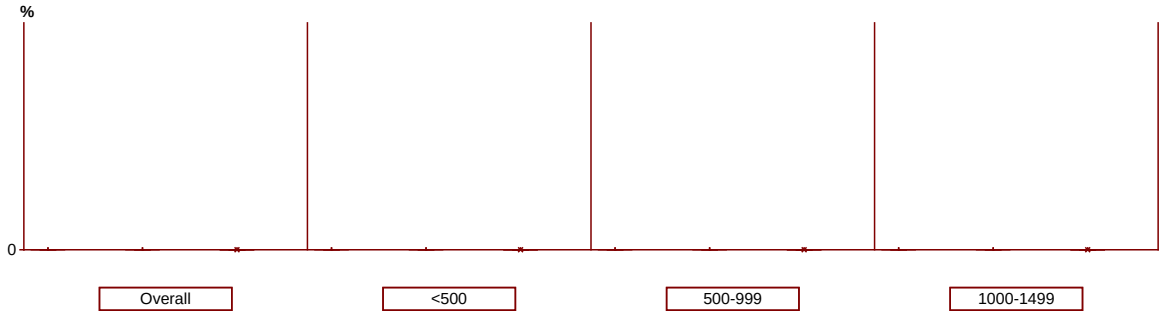
Neokiss Annual Report
D. Device-associated Infection Incidence

3. BSI PVC-associated

	Patient with device-associated infections									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with BSI PVC associated (BSI-PVC).
Total: number of PUS with PVC.
%: percent of BSI-PVC over PUS with PVC.

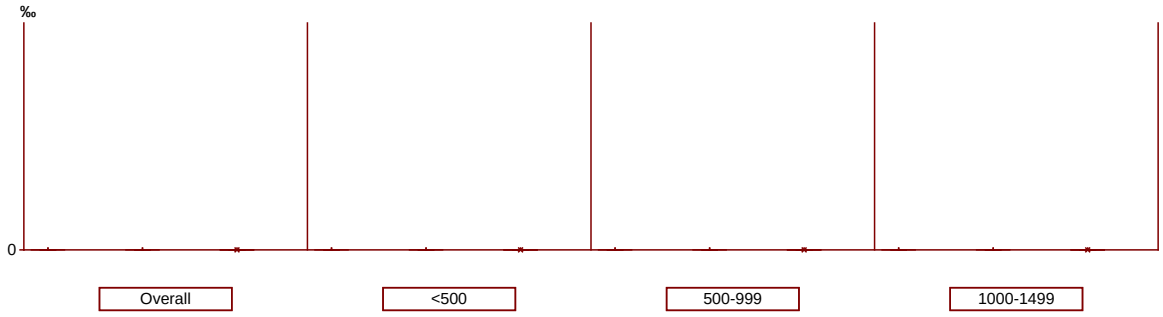
Patient with PVC-associated infections (%)



	Device associated infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with BSI PVC associated .
Total: total of surveillance days of PUS with PVC.
‰: per mille number of BSI PVC associated episodes over PUS PVC days.

PVC-associated infection episodes (in ‰)



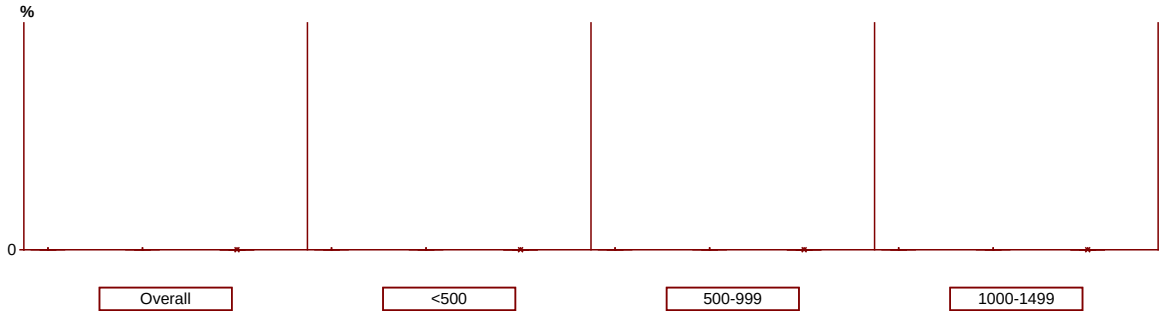
Neokiss Annual Report
D. Device-associated Infection Incidence

4. Pneumonia ventilation-associated

	Patient with device-associated infections									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with pneumonia ventilation associated (PNE-VENT).
Total: number of PUS with ventilation.
%: percent of PUS PNE-VENT over PUS with ventilation.

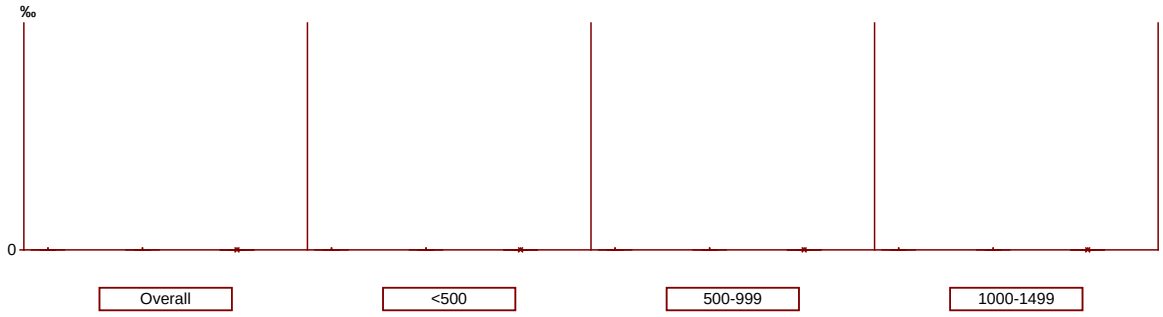
Patient with ventilation-associated infections (%)



	Device associated infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with pneumonia ventilation associated .
Total: total of surveillance days of PUS with ventilation.
‰: per mille number of pneumonia ventilation associated episodes over PUS ventilation days.

Ventilation-associated infection episodes (in ‰)

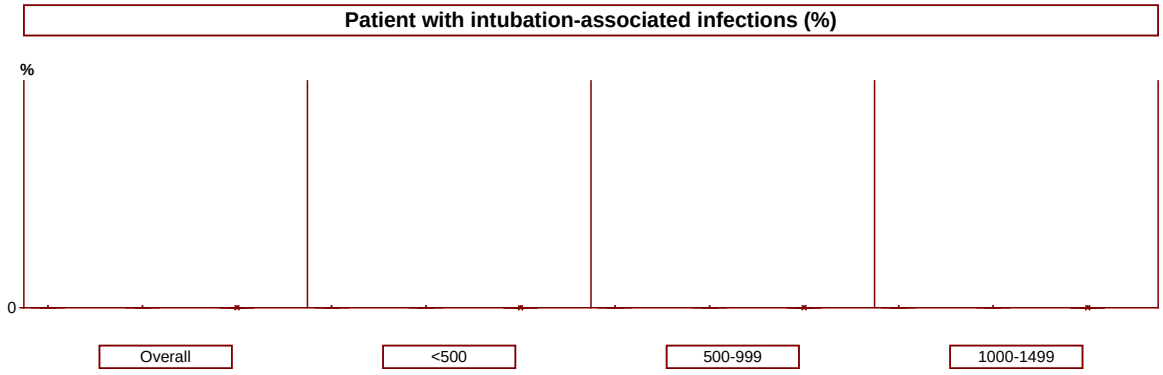


Neokiss Annual Report
D. Device-associated Infection Incidence

5. Pneumonia intubation-associated

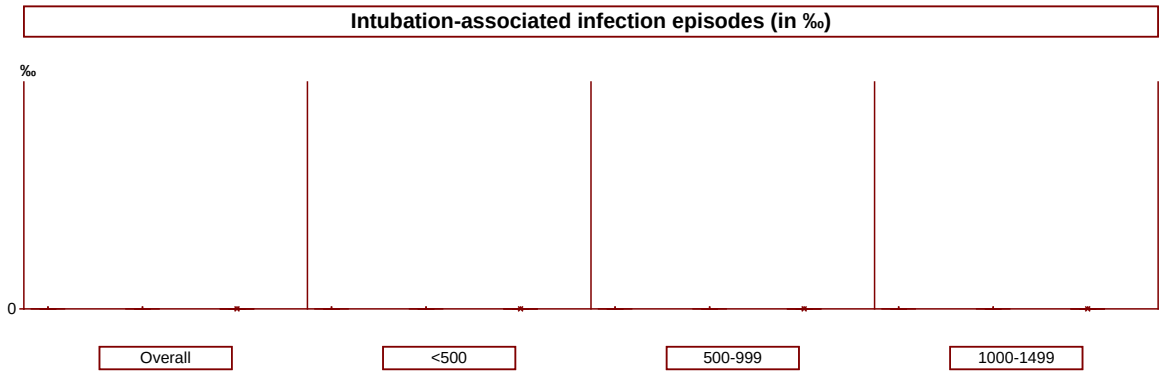
	Patient with device-associated infections									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with pneumonia intubation associated (PNE-INTUB).
Total: number of PUS with intubation.
%: percent of PUS PNE-INTUB over PUS with intubation.



	Device associated infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with pneumonia intubation associated .
Total: total of surveillance days of PUS with intubation.
‰: per mille number of pneumonia intubation associated episodes over PUS intubation days.

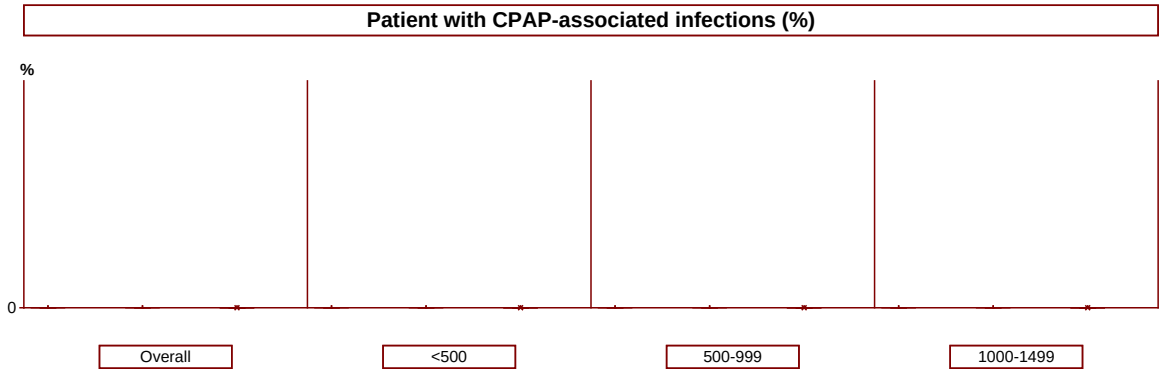


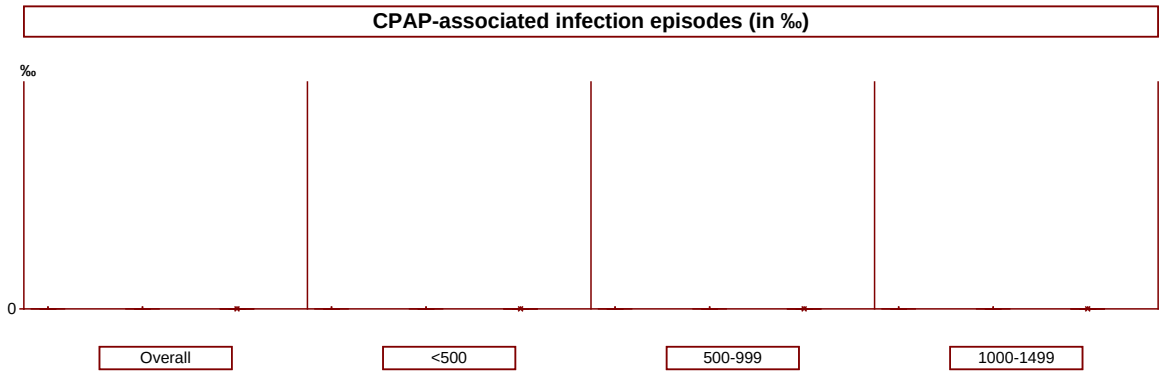
Neokiss Annual Report
D. Device-associated Infection Incidence

6. Pneumonia CPAP-associated

	Patient with device-associated infections									
	NIC 0				Ref: All NICs					
	#	Total	%	(95% CI)	#	Total	%	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of patients under surveillance (PUS) with pneumonia CPAP associated (PNE-CPAP).
Total: number of PUS with CPAP.
%: percent of PUS PNE-CPAP over PUS with CPAP.



	Device associated infection episodes									
	NIC 0				Ref: All NICs					
	#	Total days	‰ days	(95% CI)	#	Total	‰ days	(95% CI)	Distribution over NICs	
									P50[Q1-Q3]	(Range)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

#: number of episodes of patients under surveillance (PUS) with pneumonia CPAP associated .
Total: total of surveillance days of PUS with CPAP.
‰: per mille number of pneumonia CPAP associated episodes over PUS CPAP days.