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Surveillance of ICU - Acquired Infections

National Feedback Report

Infection Indicators

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Table 1: Participation

	#
unit quarters	35
hospital quarters	31
unit years	14
hospital years	13
level 1	10
level 2 basic	25
level 2a (risk factors / invasive devices)	25
level 2b (cvc utilization)	14
level 2c (antibiotic utilization)	18
Pneumonia	35
Bloodstream infections	34
Urinary tract infections	18
Catheter-related infections	19

^a unit quarters = number of IC units that participated during a particular 3-month quarter; hospital quarters = number of hospitals that participated during a particular 3-month quarter; unit years = number of IC units that participated during at least one 3-month quarter ; hospital years = number of hospitals that participated during at least one 3-month quarter

^b level = number of IC units that participated during a particular 3-month quarter; level 1 = unit-based surveillance; level 2 = patient-based surveillance

Table 2: General Indicators

	#					
	agg	p10	p25	p50	p75	p90
admissions, total	3442	54	73	177	286	519
patientdays, total	28352	391	697	1395	2284	5502
patientdays, mean	8.2	7.2	7.3	7.9	9.5	10.6
patientdays, median	5	4	4	5	6	8



Table 3: Pneumonia

	# ^a		rate ^a						
	agg.	agg.	p10	p25	p50	p75	p90		
patients with P (all)	123	3.57	1.40	3.10	4.23	5.79	8.47	/100 admissions	
patients with P ≥ D3 ^b (NP ^b)	111	3.22	1.40	2.41	3.36	5.79	7.14	/100 admissions	
patients with NP, ID2 ^b	79	2.30	0.77	1.72	2.46	4.05	5.56	/100 admissions	
P (all)	137	4.83	1.77	3.63	4.94	10.23	14.35	/1000 patientdays	
P ≥ D3 (NP)	124	4.37	1.77	2.87	4.94	10.23	11.05	/1000 patientdays	
NP, 1st ^b	111	3.92	1.77	2.87	4.94	7.89	8.61	/1000 patientdays	
NP, ID2	49	5.22	1.76	2.22	7.84	10.75	16.60	/1000 IDdays ^b	
NP, ID2, 1st	44	9.95	4.15	9.35	10.25	16.39	68.97	/1000 IDdays bef 1st NP	

^a # = total; rate = # divided by indicated denominator; agg. = aggregated over all participating units; p10-90 = percentiles for distribution of participating units

^b P = pneumonia, NP(s) = Nosocomial P, ≥ D3 = occurring after D2 (nosocomial), IDdays = Invasive Device (intubation for P) exposure days, ID2 = Invasive Device (intubation for P) exposure in 2 days before onset of NP, 1st = only 1st infection per patient



Table 4: Bloodstream Infections

	# ^a										rate ^a		
	agg.	agg.	p10	p25	p50	p75	p90						
patients with B (all)	67	1.97	0.70	1.24	1.90	2.84	3.95	/100 admissions					
patients with B ≥ D3 ^b (NB ^b)	58	1.71	0.70	1.03	1.73	2.47	3.16	/100 admissions					
patients with NB, ID2 ^b	44	1.30	0.70	0.83	1.27	1.89	2.41	/100 admissions					
B (all)	73	2.61	0.89	1.18	2.47	4.84	5.81	/1000 patientdays					
B ≥ D3 (NBs)	64	2.29	0.60	1.08	2.47	3.51	5.73	/1000 patientdays					
NB, 1st ^b	58	2.07	0.60	1.08	2.15	3.01	4.30	/1000 patientdays					
NB, ID2	46	2.12	0.89	1.13	2.34	4.07	5.00	/1000 IDdays ^b					
NB, ID2, 1st	28	2.91	0.97	2.07	2.82	4.47	8.24	/1000 IDdays bef 1st NB					
NB, ori=cat/unk ^{b,c}	46	1.64	0.60	0.79	1.56	2.54	2.96	/1000 patientdays					
NB, (ori=cat/unk, ID2)/(ori=cat) ^d	35	1.61	0.84	0.89	1.63	3.06	3.49	/1000 IDdays					
NB, ori=cat ^e	9	0.41	0.00	0.00	0.00	0.89	2.33	/1000 IDdays					
NB, ori=unk	37	1.32	0.00	0.66	1.26	1.94	2.15	/1000 patientdays					
NB, ori=cat or unk, 1st	41	1.46	0.60	0.79	1.35	2.01	2.18	/1000 patientdays					
NB, (ori=cat or unk, ID2)/(ori=cat), 1st	19	1.98	0.97	1.12	2.07	2.82	8.24	/1000 IDdays bef 1st NB					
NB, ori=cat, 1st	5	0.52	0.00	0.00	0.00	0.41	8.24	/1000 IDdays bef 1st NB					
NB, ori=unk, 1st	34	1.21	0.00	0.66	1.26	1.65	1.92	/1000 patientdays					
NBs, ID2, ≥ 1HC path or ≥ 2HCs with sc ^b	29	3.01	0.97	2.07	3.24	5.18	8.24	/1000 IDdays bef 1st NB					
NBs, ID2, ≥ 1HC path or ≥ 2HCs with sc, ori=cat	5	0.52	0.00	0.00	0.00	0.41	8.24	/1000 IDdays bef 1st NB					
NBs, ID2, ≥ 1HC path or ≥ 2HCs with sc, ori=cat, 1st	5	0.52	0.00	0.00	0.00	0.41	8.24	/1000 IDdays bef 1st NB					

^a #=total; rate=# divided by indicated denominator; agg.=aggregated over all participating units; p10-90=percentiles for distribution of participating units

^b B=Bloodstream Infection episodes; NB(s)=Nosocomial B; ≥ D3=occurring after D2 (nosocomial); IDdays=Invasive Device (central vascular catheter for B) days; ID2=Invasive Device (central vascular catheter for B) in 2 days before onset of B; 1st=only 1st infection per patient;

ori=cat/unk=NB origin is either catheter or unknown; ori=cat=NB origin is catheter; ≥ 1HC path=at least one hemoculture from a pathogen; ≥ 2HCs with sc=at least 2 hemocultures from a skincontaminant

^c Primary BSI

^d Catheter Associated Primary BSI

^e Definite Catheter Associated Primary BSI



Table 5: Urinary Tract Infections

	# ^a		rate ^a						
	agg.	agg.	p10	p25	p50	p75	p90		
patients with U (all)	69	5.66	0.00	1.37	1.38	3.17	10.60	/100 admissions	
patients with U \geq D3 (NU) ^b	67	5.49	0.00	0.00	1.38	2.82	10.60	/100 admissions	
patients with NU, ID2 ^b	56	4.59	0.00	0.00	1.38	2.82	8.48	/100 admissions	
U (all)	88	7.22	0.00	1.43	1.75	2.72	13.45	/1000 patientdays	
U \geq D3 (NU)	86	7.06	0.00	0.00	1.75	2.42	13.45	/1000 patientdays	
NU, 1st ^b	67	5.50	0.00	0.00	1.75	2.42	10.00	/1000 patientdays	
NU, ID2	68	7.05	0.00	1.38	2.88	7.33	11.65	/1000 ID days before 1st NU	
NU, ID2, 1st	56	5.44	0.00	1.67	3.48	8.06	12.49	/1000 ID days before 1st NU	

^a #=total; rate=# divided by indicated denominator; agg.=aggregated over all participating units; p10-90=percentiles for distribution of participating units

^b U=Urinary Tract Infection; NU=Nosocomial U; \geq D3=occurring after D2 (nosocomial); IDdays=Invasive Device (urinary catheter for U) days; ID2=Invasive Device (urinary catheter for U) in 2 days before onset of U; 1st=only 1st infection per patient



Table 6: Catheter Related Infections

	# ^a		rate ^a						
	agg.	agg.	p10	p25	p50	p75	p90		
patients with CRI (all)	4	0.31	0.00	0.00	0.10	1.37	1.85	/100 admissions	
patients with CRI \geq D3 (NCRI) ^b	4	0.31	0.00	0.00	0.10	1.37	1.85	/100 admissions	
CRI (all)	4	0.31	0.00	0.00	0.09	1.43	2.56	/1000 patientdays	
CRI \geq D3 (NCRI)	4	0.31	0.00	0.00	0.09	1.43	2.56	/1000 patientdays	
NCRI, 1st ^b	4	0.31	0.00	0.00	0.09	1.43	2.56	/1000 patientdays	

^a # =total; rate=# divided by indicated denominator; agg.=aggregated over all participating units; p10-90=percentiles for distribution of participating units

^b U=Catheter Related Infection; NCRI=Nosocomial CRI; \geq D3=occurring after D2 (nosocomial); 1st=only 1st infection per patient



Table 7: Case Definitions: Nosocomial Pneumonia

	# ^a		% ^a				
	agg.	agg.	p10	p25	p50	p75	p90
PN1	26	21.0	0.0	0.0	0.0	0.0	75.0
PN2	3	2.4	0.0	0.0	0.0	0.0	25.0
PN3	0	0.0	0.0	0.0	0.0	0.0	0.0
PN4	91	73.4	0.0	57.1	100.0	100.0	100.0
PN5	4	3.2	0.0	0.0	0.0	0.0	2.4

^a#=crude number; %=percentage; agg.=aggregated, treating national sample as one unit; p10-90=percentiles for national distribution

^bPN=clinical definition for Nosocomial Pneumonia; PN1=PN and positive quantitative culture from minimally contaminated lower respiratory tract specimen; PN2=PN and positive quantitative culture from possibly contaminated lower respiratory tract specimen; PN3=PN and alternative microbiology methods; PN4=PN and positive sputum culture or non-quantitative LRT specimen culture; PN5=PN with no positive microbiology

Table 8: Case Definitions: Nosocomial Bloodstream Infections

	# ^a		% ^a				
	agg.	agg.	p10	p25	p50	p75	p90
BSI-A	61	95.3	85.7	100.0	100.0	100.0	100.0
BSI-B	3	4.7	0.0	0.0	0.0	0.0	14.3

^a#=crude number; %=percentage; agg.=aggregated, treating national sample as one unit; p10-90=percentiles for national distribution

^bBSI-A=positive blood culture for a recognised pathogen or clinical signs with 2 positive blood cultures for a common skin contaminant; BSI-B=clinical signs and positive blood culture with a skin contaminant or positive blood antigen test

Table 9: Case Definitions: Nosocomial Urinary Tract Infections

	# ^a		% ^a				
	aggregated	aggregated	p10	p25	p50	p75	p90
UTI-A	86	100.0	100.0	100.0	100.0	100.0	100.0
UTI-B	0	0.0	0.0	0.0	0.0	0.0	0.0
UTI-C	0	0.0	0.0	0.0	0.0	0.0	0.0

^a#=crude number; %=percentage; agg.=aggregated, treating national sample as one unit; p10-90=percentiles for national distribution

^bUTI-A=microbiologically confirmed symptomatic UTI; UTI-B=not microbiologically confirmed symptomatic UTI; UTI-C=asymptomatic bacteriuria

Table 10: Case Definitions: Nosocomial Catheter Related Infections

	# ^a		% ^a				
	aggregated	aggregated	p10	p25	p50	p75	p90
CRI1	3	75.0	0.0	0.0	100.0	100.0	100.0
CRI2	0	0.0	0.0	0.0	0.0	0.0	0.0
CRI3	1	25.0	0.0	0.0	0.0	100.0	100.0

^a#=crude number; %=percentage; agg.=aggregated, treating national sample as one unit; p10-90=percentiles for national distribution

^bCRI1=local CVC-related infection; CRI2=general CVC-related infection; CRI3=CVC-related BSI



Table 11: All reported micro-organisms (nosocomial infections) (a)

microorganism - family	code	NP ^a		NB ^a		NU ^a		tot ^a	
		# ^b	% ^b	#	%	#	%	#	%
Gram-positive cocci		16	10.6	31	46.3	18	20.9	71	22.1
<i>Enterococcus faecalis</i>	ENCFAE	0	0.0	5	7.5	8	9.3	13	4.0
<i>Enterococcus faecium</i>	ENCFAI	0	0.0	4	6.0	7	8.1	11	3.4
<i>Enterococcus sp., not specified</i>	ENCNSP	0	0.0	0	0.0	1	1.2	3	0.9
<i>Other coagulase-negative staphylococci (cns)</i>	STAOTH	0	0.0	7	10.4	1	1.2	8	2.5
<i>Staphylococcus aureus</i>	STAAUR	12	7.9	5	7.5	0	0.0	17	5.3
<i>Staphylococcus epidermidis</i>	STAEPI	0	0.0	6	9.0	1	1.2	9	2.8
<i>Staphylococcus haemolyticus</i>	STAHAE	0	0.0	1	1.5	0	0.0	3	0.9
<i>Staphylococcus sp., not specified</i>	STANSP	0	0.0	2	3.0	0	0.0	2	0.6
<i>Streptococcus agalactiae (b)</i>	STRAGA	1	0.7	0	0.0	0	0.0	1	0.3
<i>Streptococcus pneumoniae</i>	STRPNE	3	2.0	0	0.0	0	0.0	3	0.9
<i>Streptococcus sp., not specified</i>	STRNSP	0	0.0	0	0.0	0	0.0	0	0.0
<i>Streptococcus sp., other</i>	STROTH	0	0.0	1	1.5	0	0.0	1	0.3
Gram negative cocci		1	0.7	0	0.0	0	0.0	1	0.3
<i>Moraxella catharralis</i>	MORCAT	1	0.7	0	0.0	0	0.0	1	0.3
Gram-positive bacilli		0	0.0	0	0.0	1	1.2	1	0.3
<i>Corynebacterium species</i>	CORSPP	0	0.0	0	0.0	1	1.2	1	0.3
Gram-negative bacilli, enterobacteriaceae		80	53.0	22	32.8	38	44.2	148	46.1
<i>Citrobacter freundii</i>	CITFRE	2	1.3	0	0.0	2	2.3	4	1.2
<i>Citrobacter koseri (ex. diversus)</i>	CITDIV	3	2.0	0	0.0	2	2.3	6	1.9
<i>Citrobacter sp., not specified</i>	CITNSP	1	0.7	1	1.5	0	0.0	2	0.6
<i>Enterobacter aerogenes</i>	ENBAER	5	3.3	0	0.0	0	0.0	6	1.9
<i>Enterobacter cloacae</i>	ENBCLO	7	4.6	3	4.5	3	3.5	15	4.7
<i>Enterobacteriaceae, not specified</i>	ETBNSP	1	0.7	0	0.0	0	0.0	1	0.3
<i>Escherichia coli</i>	ESCCOL	11	7.3	10	14.9	24	27.9	47	14.6
<i>Hafnia species</i>	HAFSPP	1	0.7	0	0.0	0	0.0	1	0.3
<i>Klebsiella oxytoca</i>	KLEOXY	7	4.6	1	1.5	0	0.0	8	2.5
<i>Klebsiella pneumoniae</i>	KLEPNE	16	10.6	6	9.0	4	4.7	28	8.7
<i>Klebsiella sp., not specified</i>	KLENSP	1	0.7	0	0.0	0	0.0	1	0.3
<i>Morganella species</i>	MOGSPP	9	6.0	0	0.0	3	3.5	12	3.7
<i>Proteus mirabilis</i>	PRTMIR	3	2.0	0	0.0	0	0.0	3	0.9
<i>Proteus vulgaris</i>	PRTVUL	1	0.7	0	0.0	0	0.0	1	0.3
<i>Serratia marcescens</i>	SERMAR	12	7.9	1	1.5	0	0.0	13	4.0

^a NP=Nosocomial Pneumonia, NB=Nosocomial Bloodstream Infection, NU=Nosocomial Urinary Tract Infection, tot=all Nosocomial Infections

^b #=number of micro-organisms, %=percentage of total micro-organisms



Table 12: All reported micro-organisms (nosocomial infections) (b)

microorganism - family	code	NP ^a		NB ^a		NU ^a		tot ^a	
		# ^b	% ^b	#	%	#	%	#	%
Gram-negative bacilli, other		35	23.2	6	9.0	10	11.6	53	16.5
<i>Achromobacter species</i>	ACHSPP	1	0.7	0	0.0	0	0.0	1	0.3
<i>Acinetobacter baumannii</i>	ACIBAU	1	0.7	0	0.0	0	0.0	1	0.3
<i>Acinetobacter haemolyticus</i>	ACIHAE	1	0.7	0	0.0	0	0.0	1	0.3
<i>Haemophilus influenzae</i>	HAEINF	2	1.3	0	0.0	0	0.0	2	0.6
<i>Pseudomonadaceae family, not specified</i>	PSENSP	1	0.7	0	0.0	0	0.0	1	0.3
<i>Pseudomonadaceae family, other</i>	PSEOTH	0	0.0	0	0.0	1	1.2	1	0.3
<i>Pseudomonas aeruginosa</i>	PSEAER	25	16.6	6	9.0	7	8.1	40	12.5
<i>Stenotrophomonas maltophilia</i>	STEMAL	4	2.6	0	0.0	2	2.3	6	1.9
Anaerobes		0	0.0	2	3.0	0	0.0	2	0.6
<i>Bacteroides fragilis</i>	BATFRA	0	0.0	2	3.0	0	0.0	2	0.6
Parasites		12	7.9	6	9.0	19	22.1	38	11.8
<i>Aspergillus fumigatus</i>	ASPFUM	3	2.0	0	0.0	0	0.0	3	0.9
<i>Aspergillus sp., not specified</i>	ASPNSP	1	0.7	0	0.0	0	0.0	1	0.3
<i>Candida albicans</i>	CANALB	4	2.6	4	6.0	12	14.0	21	6.5
<i>Candida glabrata</i>	CANGLA	0	0.0	0	0.0	3	3.5	3	0.9
<i>Candida parapsilosis</i>	CANPAR	0	0.0	1	1.5	1	1.2	2	0.6
<i>Candida sp., not specified</i>	CANNSP	0	0.0	0	0.0	1	1.2	1	0.3
<i>Candida sp., other</i>	CANOTH	0	0.0	0	0.0	2	2.3	2	0.6
<i>Candida tropicalis</i>	CANTRO	0	0.0	1	1.5	0	0.0	1	0.3
<i>Filaments other</i>	FILOTH	2	1.3	0	0.0	0	0.0	2	0.6
<i>Other yeasts</i>	YEAOTH	2	1.3	0	0.0	0	0.0	2	0.6
Virus		2	1.3	0	0.0	0	0.0	2	0.6
<i>Cytomegalovirus (cmv)</i>	VIRCMV	1	0.7	0	0.0	0	0.0	1	0.3
<i>Herpes simplex virus</i>	VIRHSV	1	0.7	0	0.0	0	0.0	1	0.3

^a NP=Nosocomial Pneumonia, NB=Nosocomial Bloodstream Infection, NU=Nosocomial Urinary Tract Infection, tot=all Nosocomial Infections

^b #=number of micro-organisms, %=percentage of total micro-organisms



Table 13: Anti Microbial Resistance Indicators I: Gram Positive Cocci

	SIR ^a										IR ^a			
	# ^a	% ^a	p10	p25	p50	p75	p90	# ^a	% ^a	p10	p25	p50	p75	p90
Staphylococcus aureus														
cultures	17													
Fluoroquinolones: Ciprofloxacin/ofloxacin	3	17.6	0.0	0.0	0.0	100.0	100.0	1	33.3	0.0	0.0	0.0	100.0	100.0
Macrolides/sim.: Clindamycin (lincosamides)	1	5.9	0.0	0.0	0.0	0.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Macrolides/sim.: Erythromycin (macrolides)	2	11.8	0.0	0.0	0.0	100.0	100.0	1	50.0	0.0	0.0	50.0	100.0	100.0
Other antibiotics: Fosfomicin	1	5.9	0.0	0.0	0.0	0.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Other antibiotics: Fusidic acid	1	5.9	0.0	0.0	0.0	0.0	100.0	1	100.0	100.0	100.0	100.0	100.0	100.0
Aminoglycosides: Gentamycin	7	41.2	0.0	0.0	0.0	100.0	100.0	1	14.3	0.0	0.0	0.0	20.0	20.0
Glycopeptides: Vancomycin/teicoplanin (Glycopeptides)	9	52.9	0.0	14.3	100.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Penicillins: Methicillin/Oxacillin (beta-lact.res.penic.)	17	100.0	100.0	100.0	100.0	100.0	100.0	4	23.5	0.0	0.0	14.3	50.0	100.0
Penicillins: Penicillin	1	5.9	0.0	0.0	0.0	0.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Streptococcus pneumoniae														
cultures	3													
Penicillins: Ampicillin	0	0.0	0.0	0.0	0.0	0.0	0.0							
Cephalosporins: Cefotaxime/ceftriaxone (3rd gen cephalosp.)	3	100.0	100.0	100.0	100.0	100.0	100.0	1	33.3	0.0	0.0	25.0	50.0	50.0
Macrolides/sim.: Clindamycin (lincosamides)	0	0.0	0.0	0.0	0.0	0.0	0.0							
Macrolides/sim.: Erythromycin (macrolides)	3	100.0	100.0	100.0	100.0	100.0	100.0	2	66.7	50.0	50.0	75.0	100.0	100.0
Penicillins: Methicillin/Oxacillin (beta-lact.res.penic.)	1	33.3	0.0	0.0	50.0	100.0	100.0	1	100.0	100.0	100.0	100.0	100.0	100.0
Penicillins: Penicillin	1	33.3	0.0	0.0	25.0	50.0	50.0	1	100.0	100.0	100.0	100.0	100.0	100.0
Tetracyclines: Tetra-/doxy-/minocycline (tetracyclines)	2	66.7	0.0	0.0	50.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Enterococcus faecalis														
cultures	13													
Penicillins: Ampicillin	12	92.3	0.0	100.0	100.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Penicillins: Amoxicillin/clavulanate	5	38.5	0.0	0.0	0.0	37.5	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Aminoglycosides: Gentamycin	10	76.9	0.0	50.0	87.5	100.0	100.0	3	30.0	0.0	0.0	14.3	64.3	100.0
Glycopeptides: Vancomycin/teicoplanin (Glycopeptides)	11	84.6	0.0	0.0	100.0	100.0	100.0	1	9.1	0.0	0.0	0.0	12.5	12.5

^a SIR=all Sensitive/Intermediate/Resistant antibiogram results, IR=all Intermediate/Resistant antibiogram results, #=#/100 cultures (SIR) or #/100 SIR results (IR).



Table 14: Anti Microbial Resistance Indicators II: Enterobacteriaceae (a)

	# ^a	% ^a	SIR ^a							IR ^a						
			p10	p25	p50	p75	p90	# ^a	% ^a	p10	p25	p50	p75	p90		
<i>Escherichia coli</i>																
cultures	47															
Penicillins: Amoxicillin/clavulanate	45	95.7	41.7	100.0	100.0	100.0	100.0	100.0	20	44.4	0.0	33.3	50.0	66.7	100.0	
Cephalosporins: Cefotaxime/ceftriaxone (3rd gen cephalosp.)	43	91.5	80.0	100.0	100.0	100.0	100.0	100.0	9	20.9	0.0	0.0	11.1	33.3	50.0	
Carbapenems: Meropenem/impipenem (carbapenems)	39	83.0	0.0	40.0	100.0	100.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0	
ESBL: Extended Spectrum Beta Lactamase	6	12.8	0.0	0.0	0.0	100.0	100.0	100.0	1	16.7	0.0	0.0	0.0	25.0	50.0	
<i>Enterobacter aerogenes</i>																
cultures	6															
Penicillins: Amoxicillin/clavulanate	6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6	100.0	100.0	100.0	100.0	100.0	100.0	
Cephalosporins: Cefotaxime/ceftriaxone (3rd gen cephalosp.)	6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6	100.0	100.0	100.0	100.0	100.0	100.0	
Carbapenems: Meropenem/impipenem (carbapenems)	3	50.0	0.0	50.0	100.0	100.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0	
ESBL: Extended Spectrum Beta Lactamase	1	16.7	0.0	0.0	0.0	50.0	100.0	100.0	1	100.0	100.0	100.0	100.0	100.0	100.0	
<i>Enterobacter cloacae</i>																
cultures	15															
Penicillins: Amoxicillin/clavulanate	13	86.7	0.0	0.0	100.0	100.0	100.0	100.0	13	100.0	100.0	100.0	100.0	100.0	100.0	
Cephalosporins: Cefotaxime/ceftriaxone (3rd gen cephalosp.)	12	80.0	0.0	0.0	87.5	100.0	100.0	100.0	8	66.7	0.0	16.7	56.7	90.0	100.0	
Carbapenems: Meropenem/impipenem (carbapenems)	12	80.0	0.0	0.0	87.5	100.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0	
ESBL: Extended Spectrum Beta Lactamase	1	6.7	0.0	0.0	0.0	0.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0	

^a SIR=all Sensitive/Intermediate/Resistant antibiotic results, IR=all Intermediate/Resistant antibiotic results. #=#/100 cultures (SIR) or #/100 SIR results (IR),



Table 15: Anti Microbial Resistance Indicators III: Enterobacteriaceae (b)

	SIR ^a										IR ^a				
	# ^a	% ^a	p10	p25	p50	p75	p90	# ^a	% ^a	p10	p25	p50	p75	p90	
<i>Klebsiella pneumoniae</i>															
cultures	28														
Penicillins: Amoxicillin/clavulanate	25	89.3	0.0	100.0	100.0	100.0	100.0	15	60.0	0.0	12.5	50.0	100.0	100.0	
Cephalosporins: Cefotaxime/ceftriaxone (3rd gen cephalosp.)	21	75.0	0.0	55.6	100.0	100.0	100.0	10	47.6	0.0	0.0	16.7	80.0	100.0	
Carbapenems: Meropenem/impipenem (carbapenems)	18	64.3	0.0	22.2	100.0	100.0	100.0	1	5.6	0.0	0.0	0.0	0.0	25.0	
ESBL: Extended Spectrum Beta Lactamase	1	3.6	0.0	0.0	0.0	0.0	16.7	1	100.0	100.0	100.0	100.0	100.0	100.0	
<i>Klebsiella oxytoca</i>															
cultures	8														
Penicillins: Amoxicillin/clavulanate	7	87.5	0.0	100.0	100.0	100.0	100.0	4	57.1	0.0	25.0	75.0	100.0	100.0	
Cephalosporins: Cefotaxime/ceftriaxone (3rd gen cephalosp.)	6	75.0	0.0	75.0	100.0	100.0	100.0	3	50.0	0.0	0.0	33.3	83.3	100.0	
Carbapenems: Meropenem/impipenem (carbapenems)	4	50.0	0.0	25.0	100.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0	
ESBL: Extended Spectrum Beta Lactamase	1	12.5	0.0	0.0	0.0	0.0	100.0	1	100.0	100.0	100.0	100.0	100.0	100.0	

^a SIR=all Sensitive/Intermediate/Resistant antibiogram results, IR=all Intermediate/Resistant antibiogram results, #=aggregated total, %=#/100 cultures (SIR) or #/100 SIR results (IR),



Table 16: Anti Microbial Resistance Indicators IV: Nonfermentative Bacilli

	SIR ^a										IR ^a											
	# ^a	% ^a	p10	p25	p50	p75	p90	# ^a	% ^a	p10	p25	p50	p75	p90	# ^a	% ^a	p10	p25	p50	p75	p90	
<i>Pseudomonas aeruginosa</i>																						
cultures																						
Carbapenems: Meropenem/imipenem (carbapenems)	40	75.0	57.1	61.9	100.0	100.0	100.0	13	43.3	0.0	0.0	18.8	75.0	100.0	0.0	43.3	0.0	0.0	18.8	75.0	100.0	100.0
Cephalosporins: Ceftazidim (anti-pseudom 3G ceph)	35	87.5	66.7	80.2	100.0	100.0	100.0	14	40.0	0.0	0.0	0.0	54.8	100.0	0.0	40.0	0.0	0.0	0.0	54.8	100.0	100.0
Polymyx.: Colistin (polymixins)	19	47.5	0.0	0.0	28.6	81.9	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Penicillins: Piperacillin/ticarcillin (anti-pseudom. penic.)	17	42.5	0.0	0.0	45.8	100.0	100.0	4	23.5	0.0	0.0	0.0	66.7	100.0	0.0	23.5	0.0	0.0	0.0	66.7	100.0	100.0
Penicillins: Piperacillin/ticarcillin + enzyme inhibitor	29	72.5	0.0	54.8	94.4	100.0	100.0	12	41.4	0.0	0.0	18.8	66.7	100.0	0.0	41.4	0.0	0.0	18.8	66.7	100.0	100.0
<i>Acinetobacter baumannii</i>																						
cultures																						
Carbapenems: Meropenem/imipenem (carbapenems)	1	100.0	100.0	100.0	100.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cephalosporins: Ceftazidim (anti-pseudom 3G ceph)	1	100.0	100.0	100.0	100.0	100.0	100.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Polymyx.: Colistin (polymixins)	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Penicillins: Piperacillin/ticarcillin (anti-pseudom. penic.)	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Penicillins: Piperacillin/ticarcillin + enzyme inhibitor	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

^a SIR=all Sensitive/Intermediate/Resistant antibiotic results, IR=all Intermediate/Resistant antibiotic results, #=#/100 cultures (SIR) or #/100 SIR results (IR),



Table 17: Missing Infection variables

variable	L1 ^a	L2 ^a	Ls ^a	Req ^a	# ^a	% ^a	p10	p25	p50	p75	p90
invasive device in 48 hours preceding infection	V	V	0	R	29	10.0	0.0	0.0	0.0	9.5	22.2
origin of bloodstream infection	V	V	0	O	21	28.8	0.0	0.0	14.3	50.0	87.5
antimicrobial treatment	V	V	0	O	108	37.2	0.0	4.8	14.3	50.0	100.0
Microorganism indicator	V	V	0	M	4	1.4	0.0	0.0	0.0	0.0	10.5
total infection variables	V	V	0	O	162	12.8	1.3	3.6	8.3	14.9	25.0

^a L1= level 1 variable (denominator-based surveillance) ; L2= level 2 variable (patient-based surveillance) ; L2s= level 2 suboption (0=basic level 2 variables a=extra patient admission and day by day variables, b=central vascular catheter follow-up, c=antimicrobial treatment follow-up); Req: M=mandatory, R=Required, O=Optional #=number of missing variables; %=# / 100 eligible records



Hospital (all) :
3442 patients

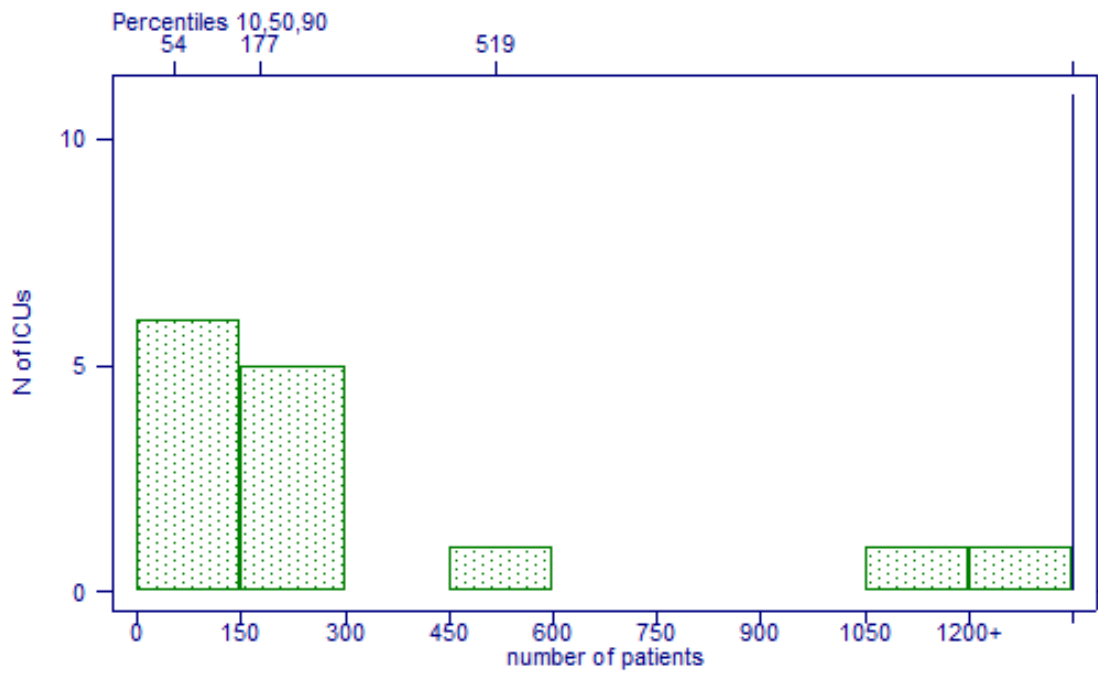


Figure 1: Distribution: number of patients

Hospital (all) :
8.2 days

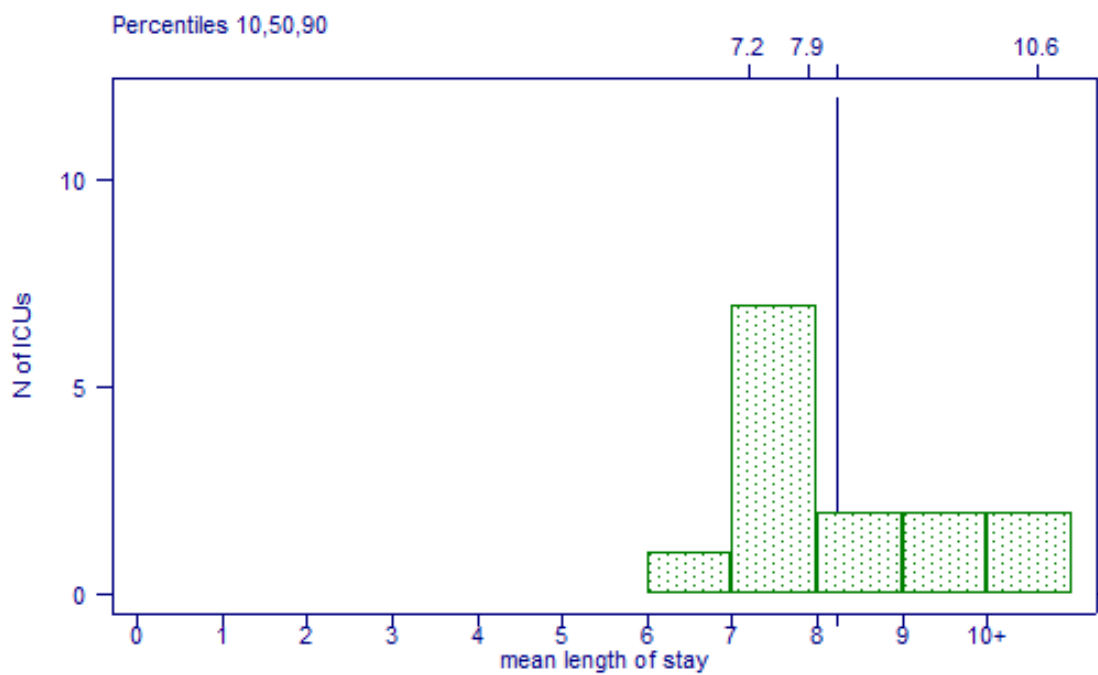


Figure 2: Distribution: mean length of stay



Hospital (all) :
4.4 NP/1000 patientdays (95% CI 3.6 - 5.2)

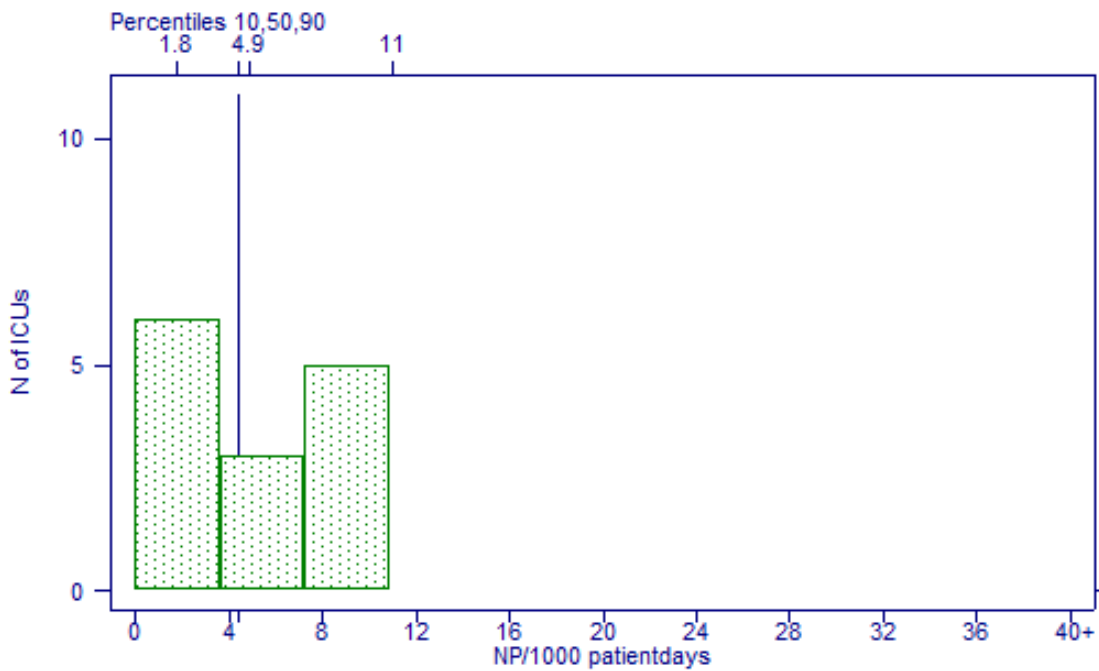


Figure 3: Distribution: $P \geq D3$ (NP) / 1000 patientdays

Hospital (all) :
5.2 NPs, ID2, all / 1000 IDdays (95% CI 3.9 - 6.9)

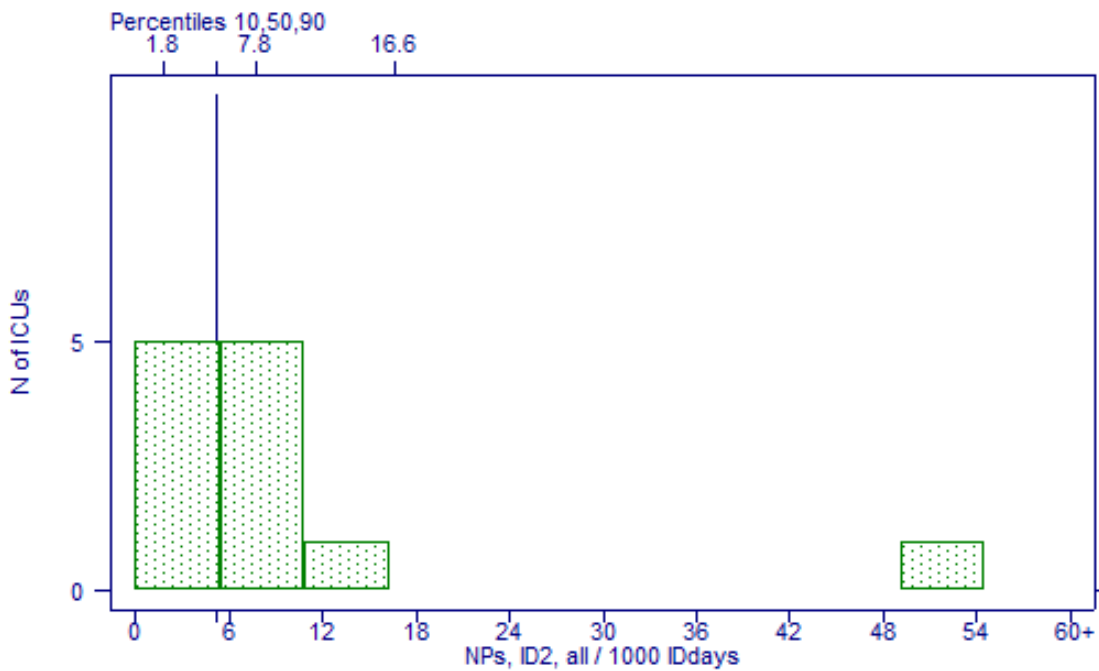


Figure 4: Distribution: NPs, ID2, all / 1000 IDdays ; NPs, with intubation in 2 days before onset of NP, all episodes / 1000 intubation days



Hospital (all) :
10 NPs, ID2, 1st / 1000 IDdays bef 1st NP (95% CI 7.2 - 13.4)

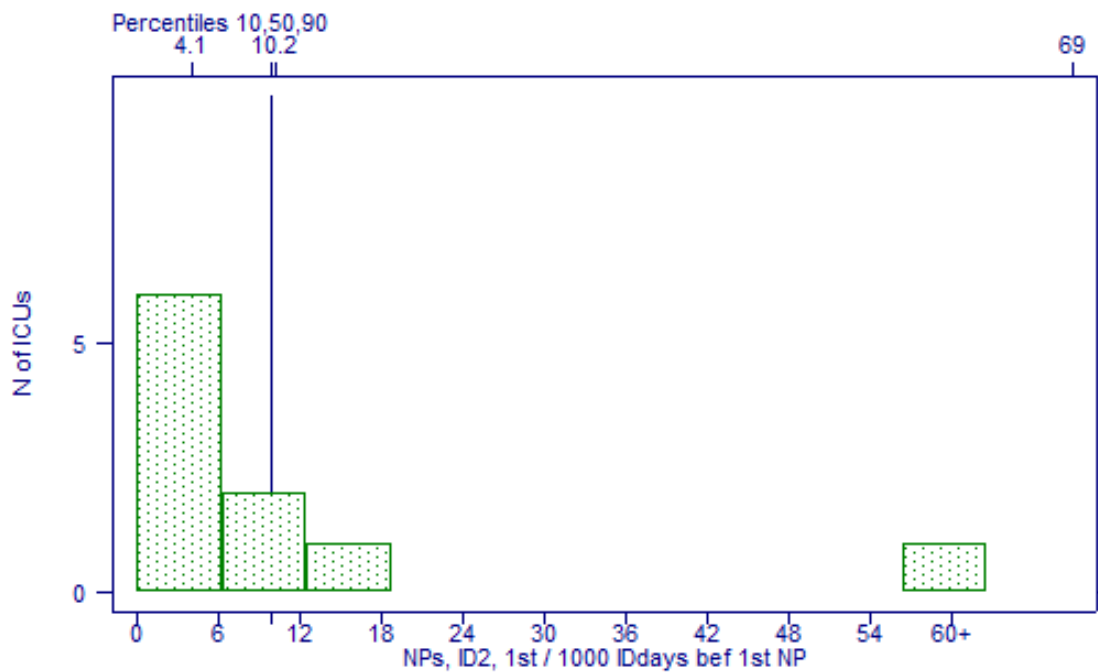


Figure 5: Distribution: NPs, ID2, 1st / 1000 IDdays bef 1st NP ; NPs, 1st episode only, with intubation in 2 days before onset of NP / 1000 intubation days



Hospital (all) :
2.3 Bs \geq D3 (NBs) / 1000 patientdays (95% CI 1.7 - 2.9)

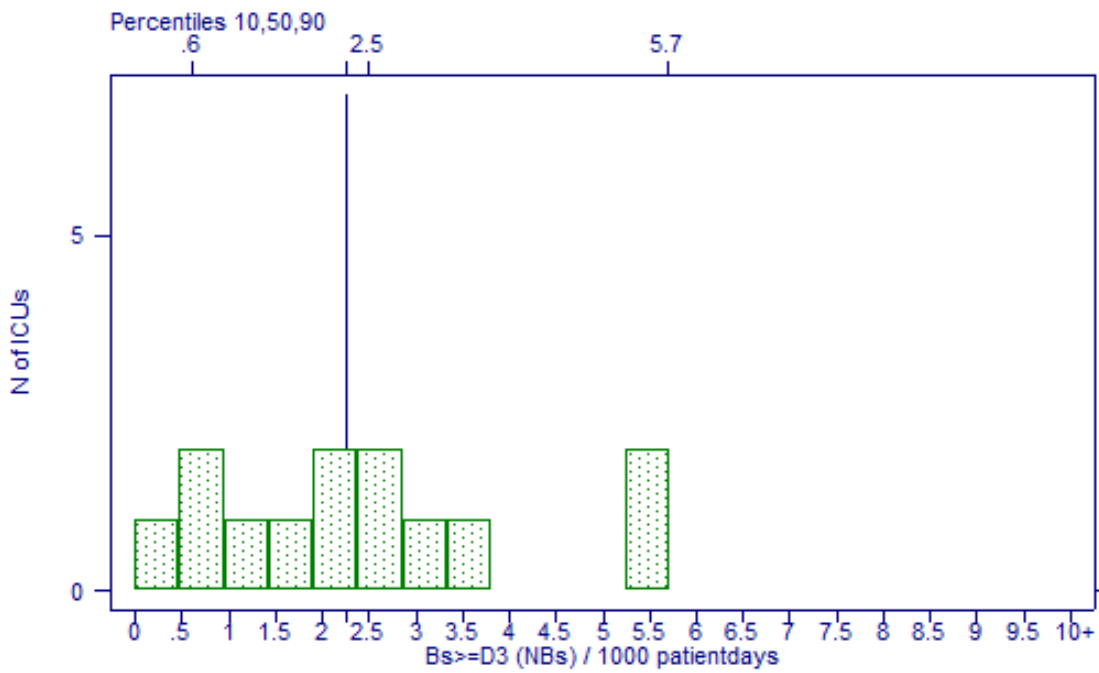


Figure 6: Distribution: Bs \geq D3 (NBs) / 1000 patientdays

Hospital (all) :
2.1 NBs, ID2, all / 1000 IDdays (95% CI 1.5 - 2.8)

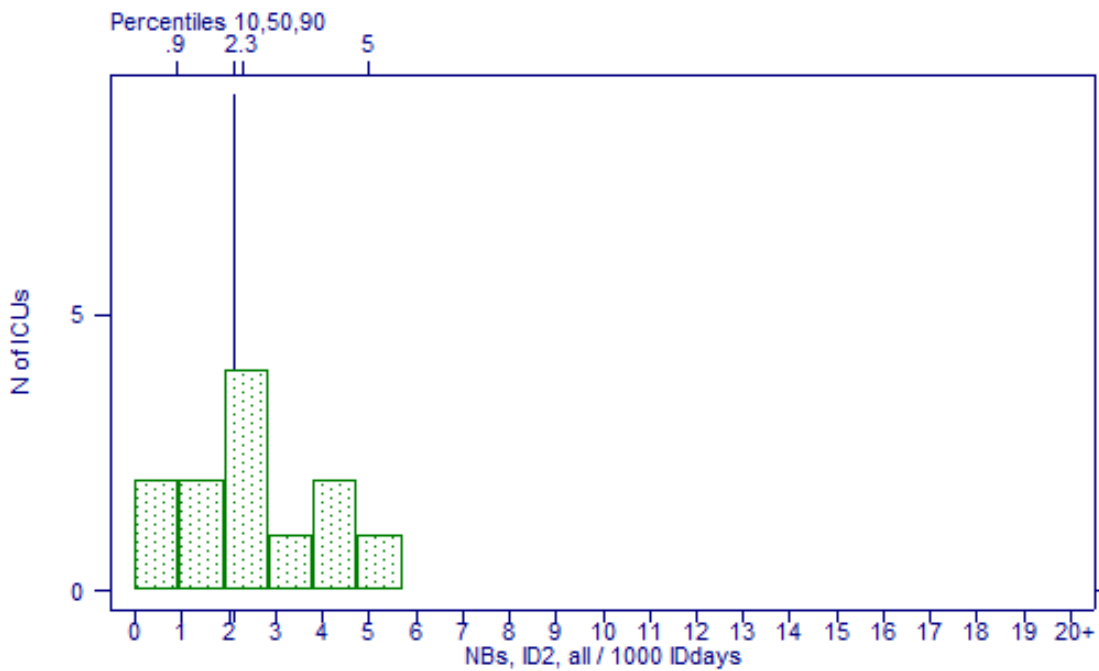


Figure 7: Distribution: NBs, with catheter use in 2days preceding onset of infection, all / 1000 IDdays ; NBs, with catheter use in 2days preceding onset of infection, all episodes / 1000 catheterdays



Hospital (all) :
1.6 NBs, ori=(cat/un) / 1000 patientdays (95% CI 1.2 - 2.2)

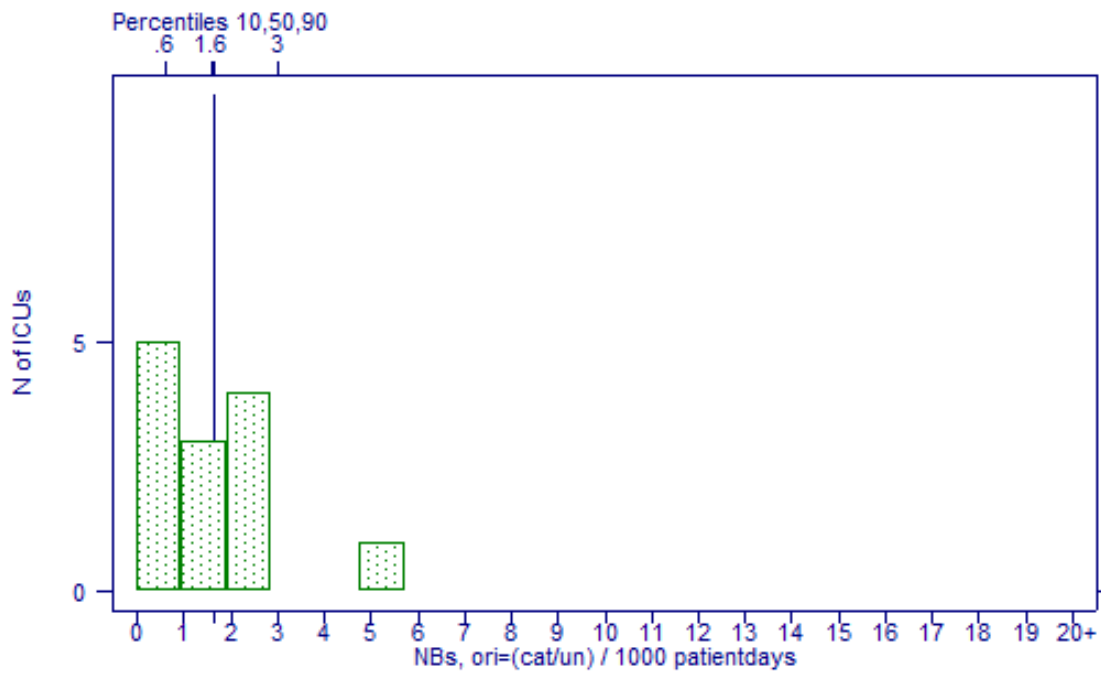


Figure 8: Distribution: NBs, ori=cat/un / 1000 patientdays ; primary NBs / 1000 patientdays

Hospital (all) :
1.6 NBs, (ori=cat/un,ID2) / 1000 IDdays (95% CI 1.1 - 2.2)

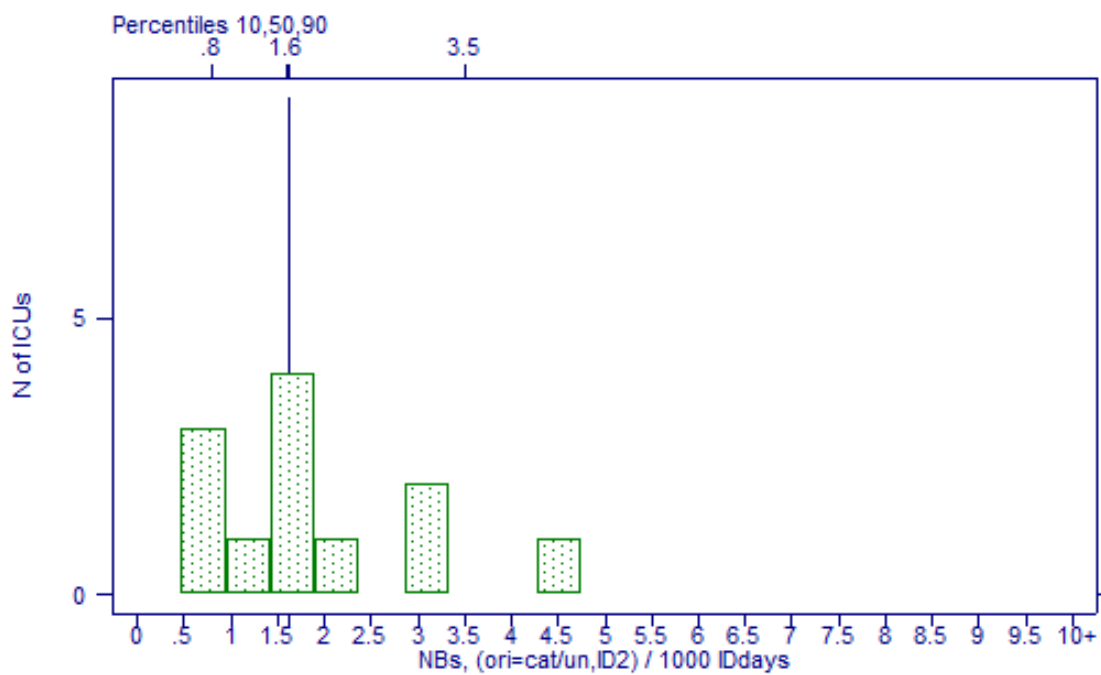


Figure 9: Distribution: NBs, (ori=cat/un,ID2) OR (ori=cat) / 1000 IDdays ; catheter associated NBs / 1000 catheterdays (CDC)



Hospital (all) :
.5 NBs, ori=cat, 1st / 1000 IDdays bef 1st NB (95% CI .2 - 1.2)

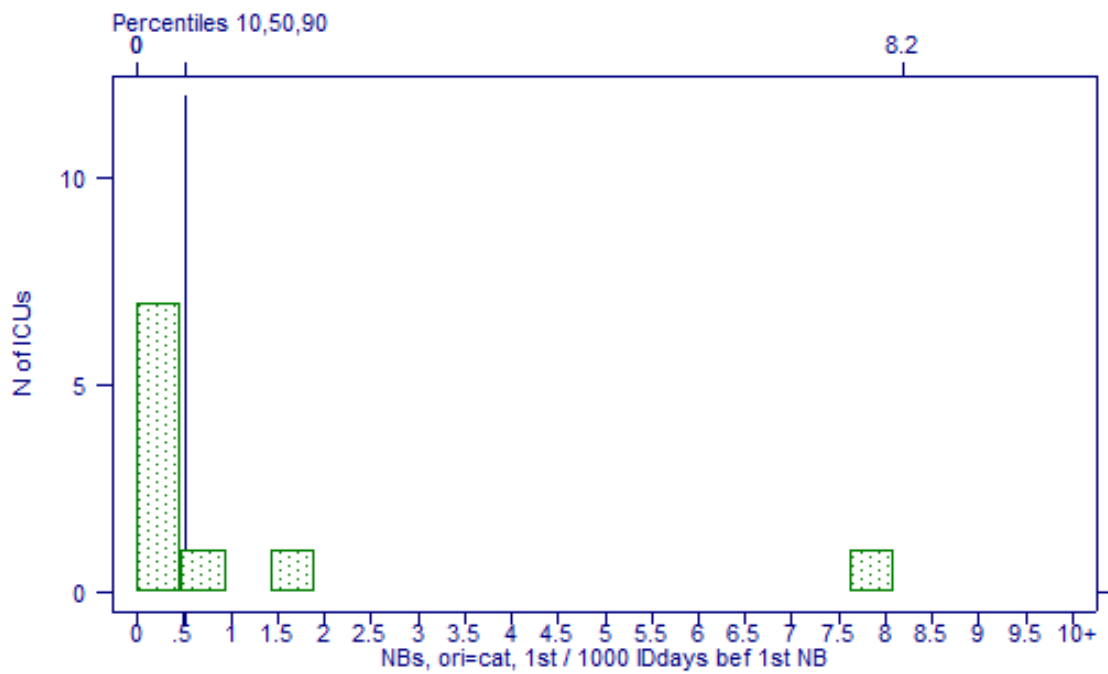


Figure 10: Distribution: NBs, ori=cat, 1st / 1000 IDdays bef 1st NB ; definite catheter associated NBs, 1st episodes only / 1000 catheterdays



Hospital (all) :
3 NUs / 1000 patientdays (95% CI 2.4 - 3.7)

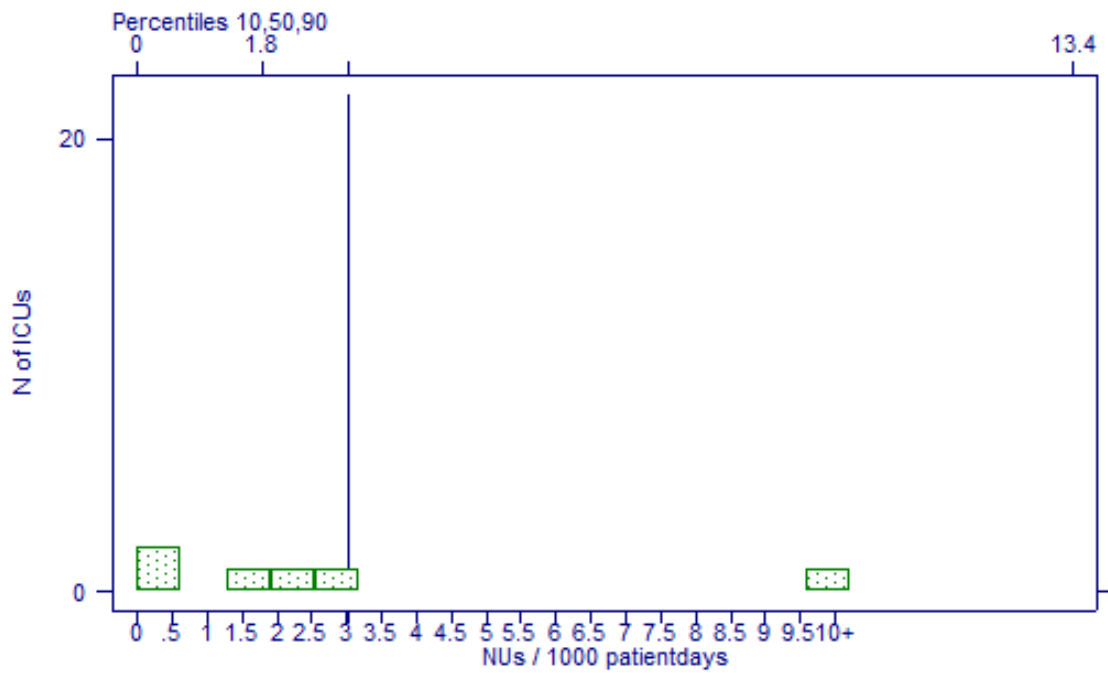


Figure 11: Distribution: $Us_{\geq D3}$ (NU) / 1000 patientdays ; NUs / 1000 patientdays

Hospital (all) :
5.1 NUs, ID2 / 1000 ID days (95% CI 3.9 - 6.4)

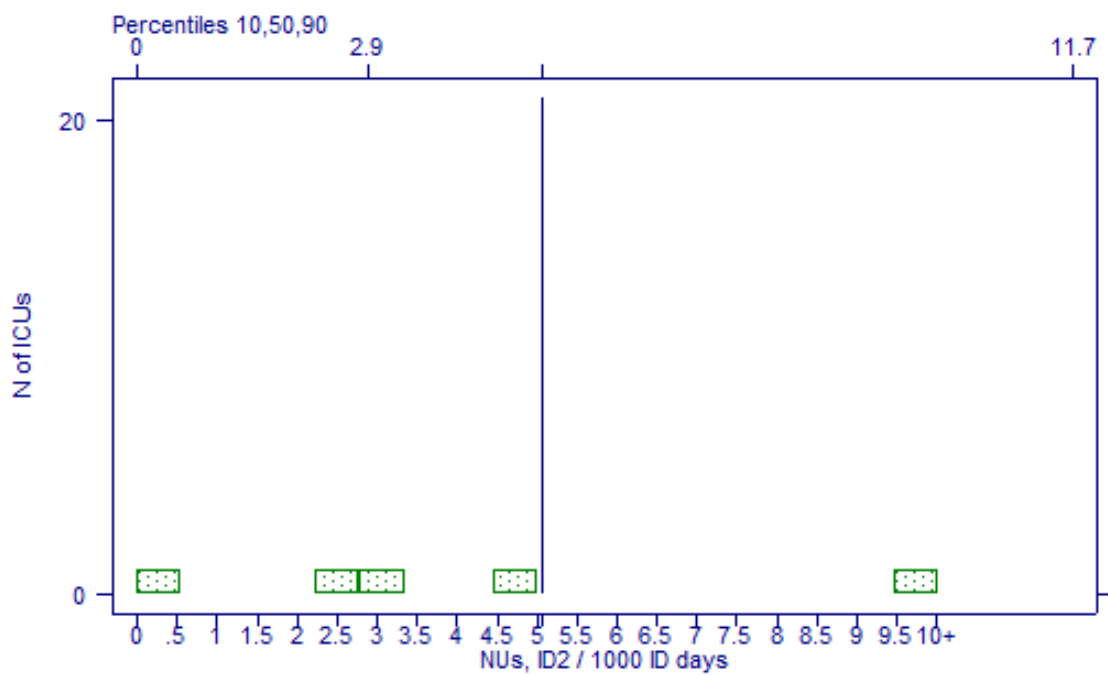


Figure 12: Distribution: NUs, ID2 / 1000 ID days ; catheter associated NUs / 1000 urinary catheterdays

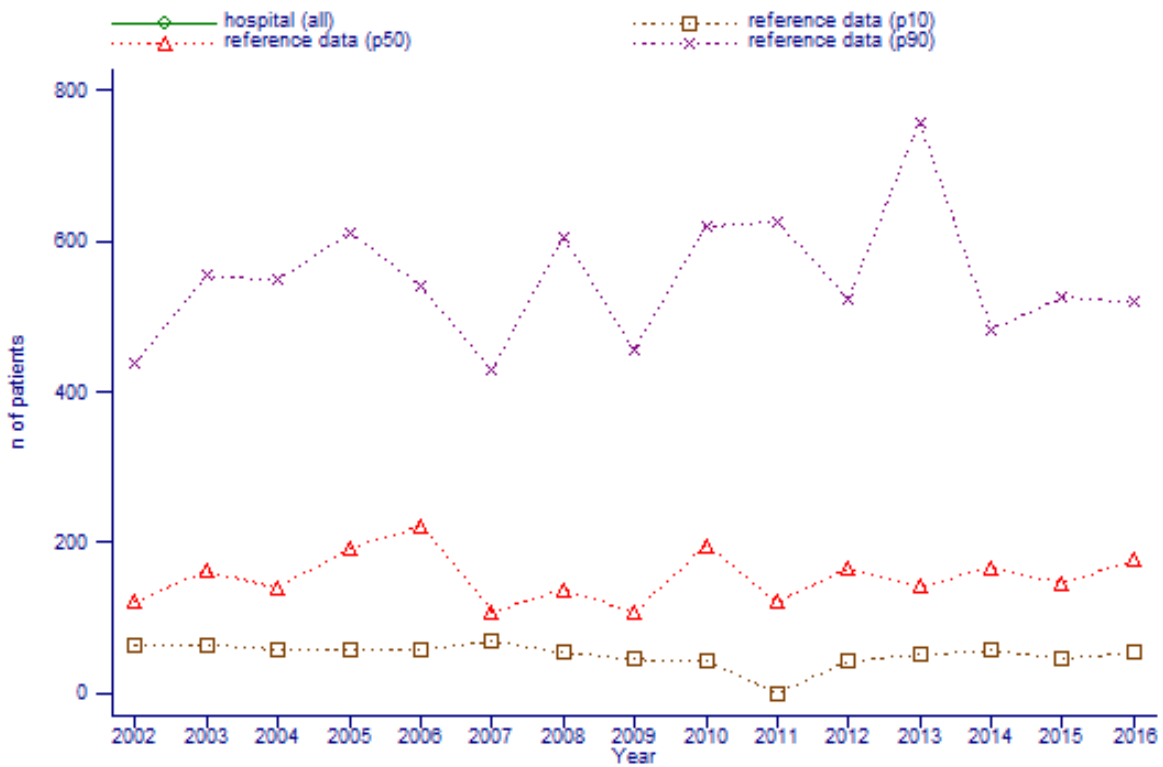


Figure 13: Evolution: Number of patients

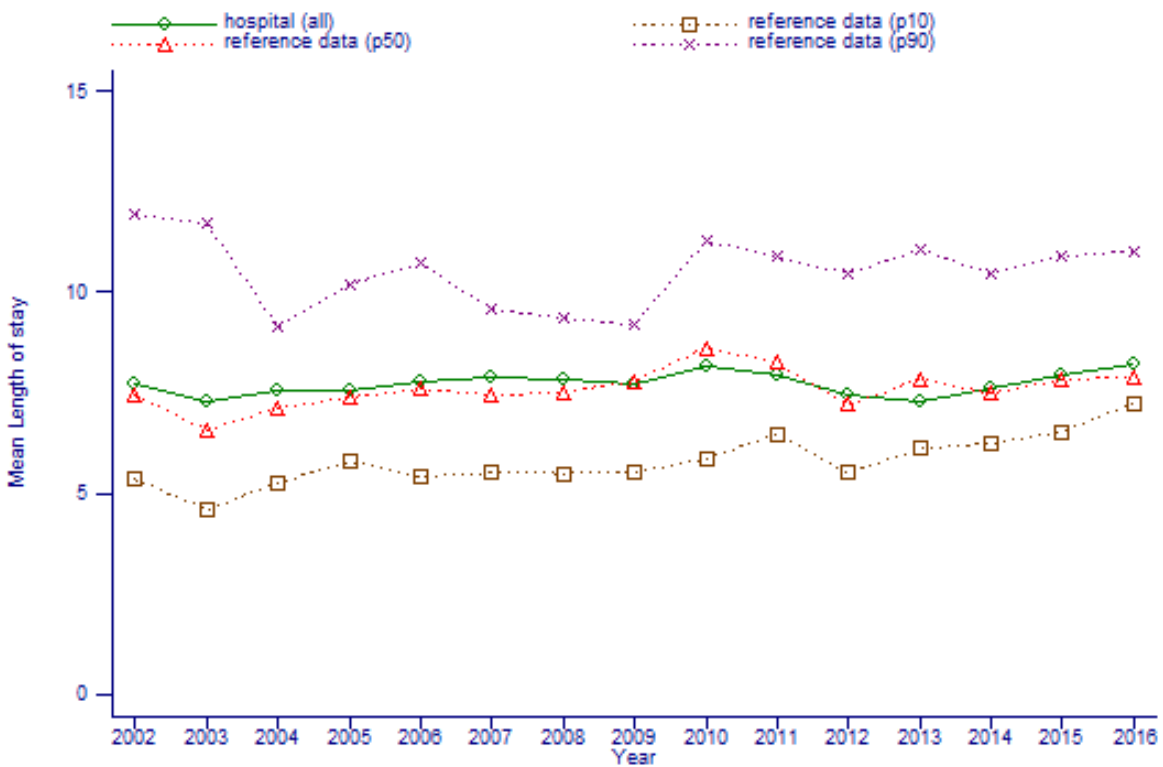


Figure 14: Evolution: Mean Length of stay

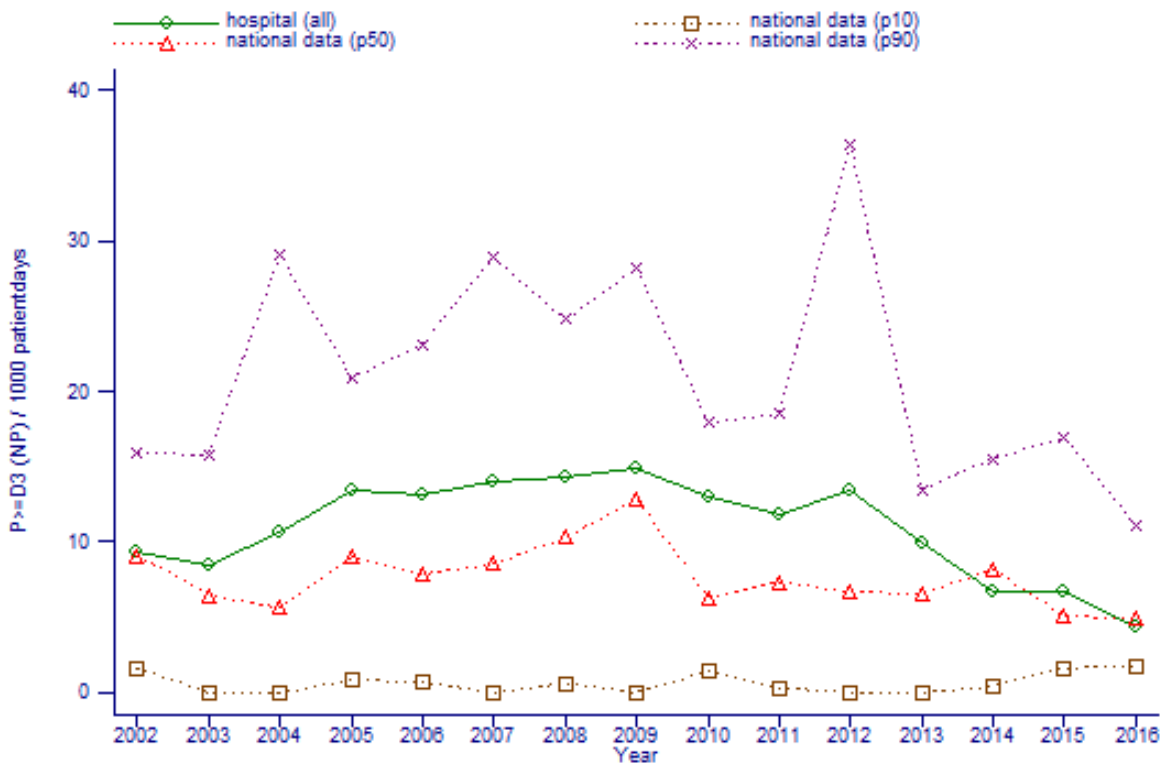


Figure 15: Evolution: P_≥D3 (NP) / 1000 patientdays

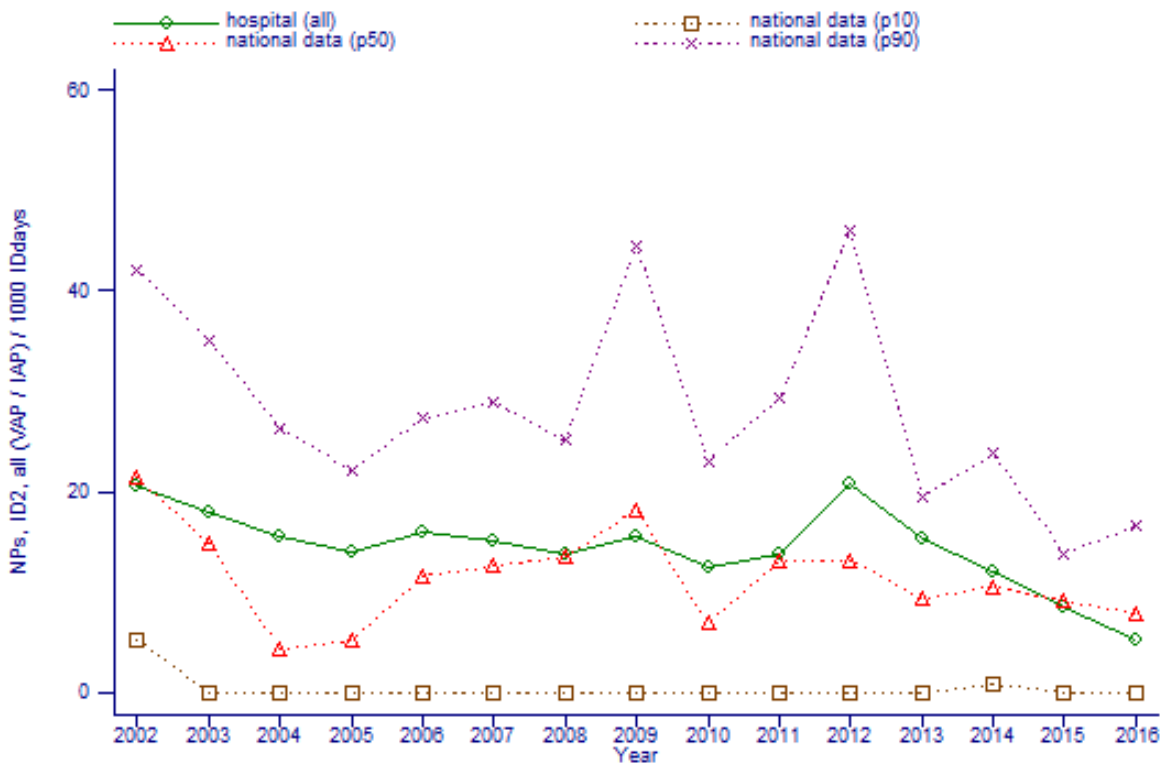


Figure 16: Evolution: NPs, ID2, all / 1000 IDdays ; NPs, with intubation in 2 days before onset of NP, all episodes / 1000 intubation days

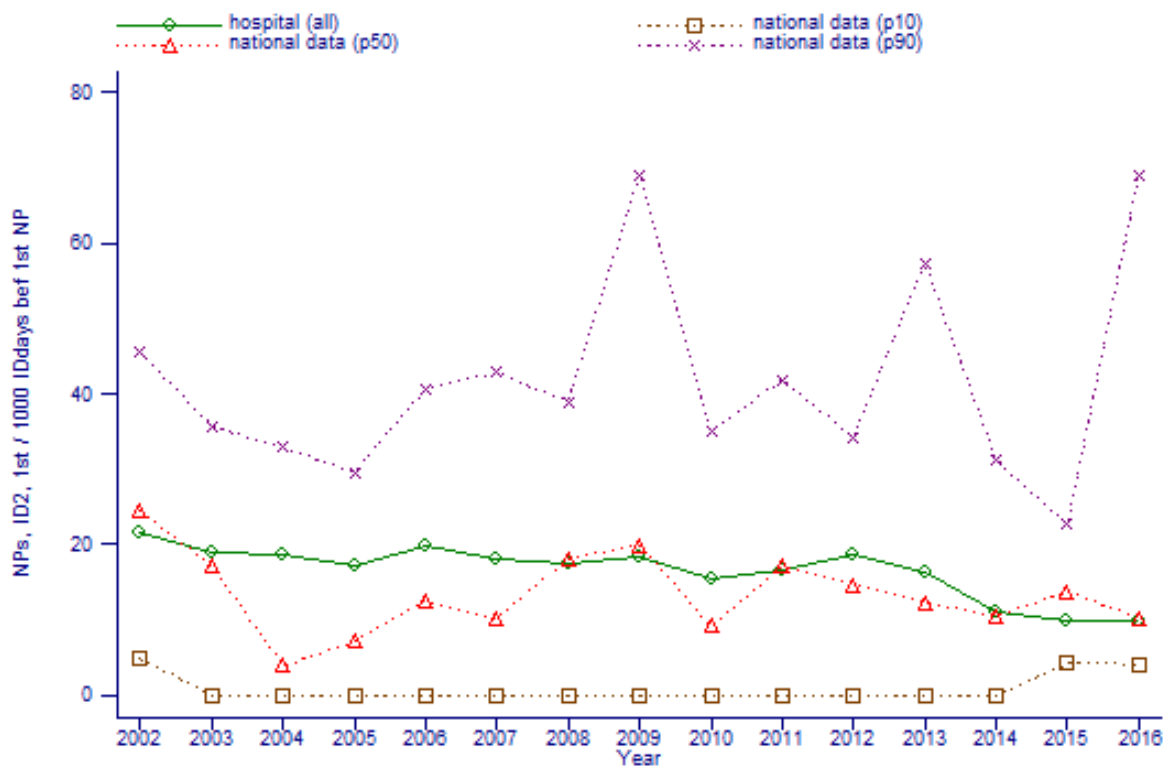


Figure 17: Evolution: NPs, ID2, 1st / 1000 IDdays bef 1st NP ; NPs, with intubation in 2 days before onset of NP, 1st episode only / 1000 intubation days

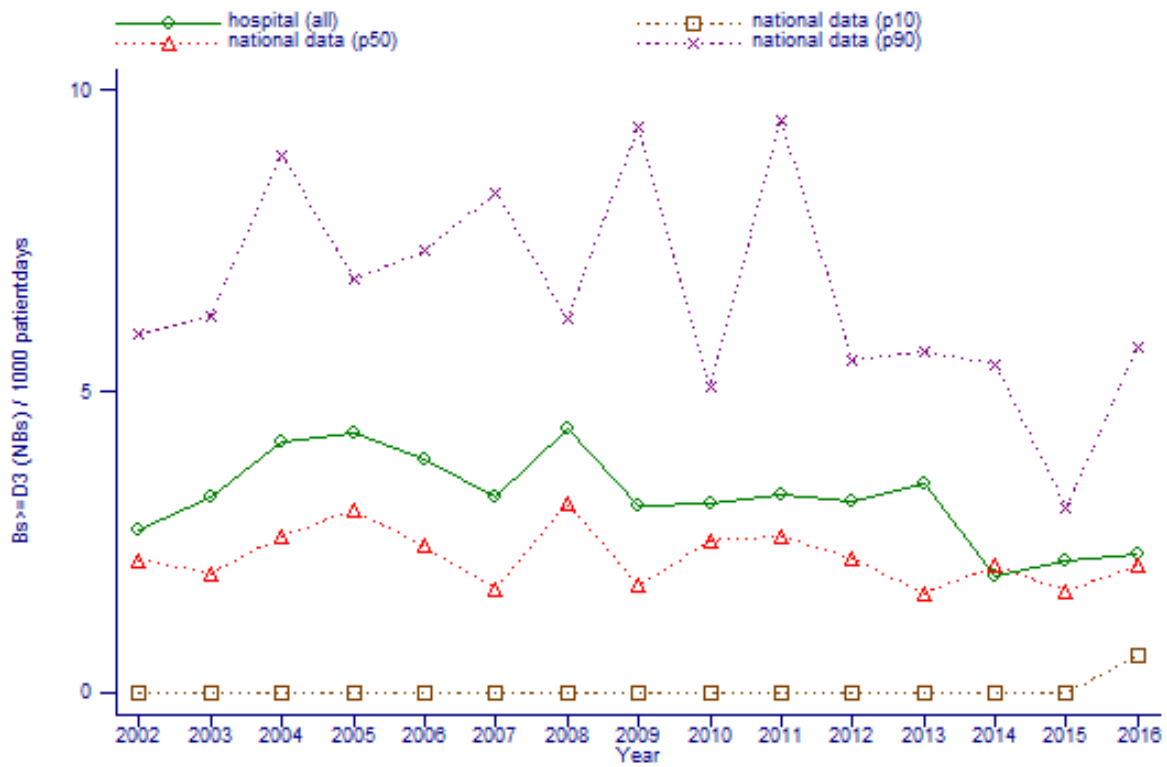


Figure 18: Evolution: $Bs \geq D3$ (NBs) / 1000 patientdays

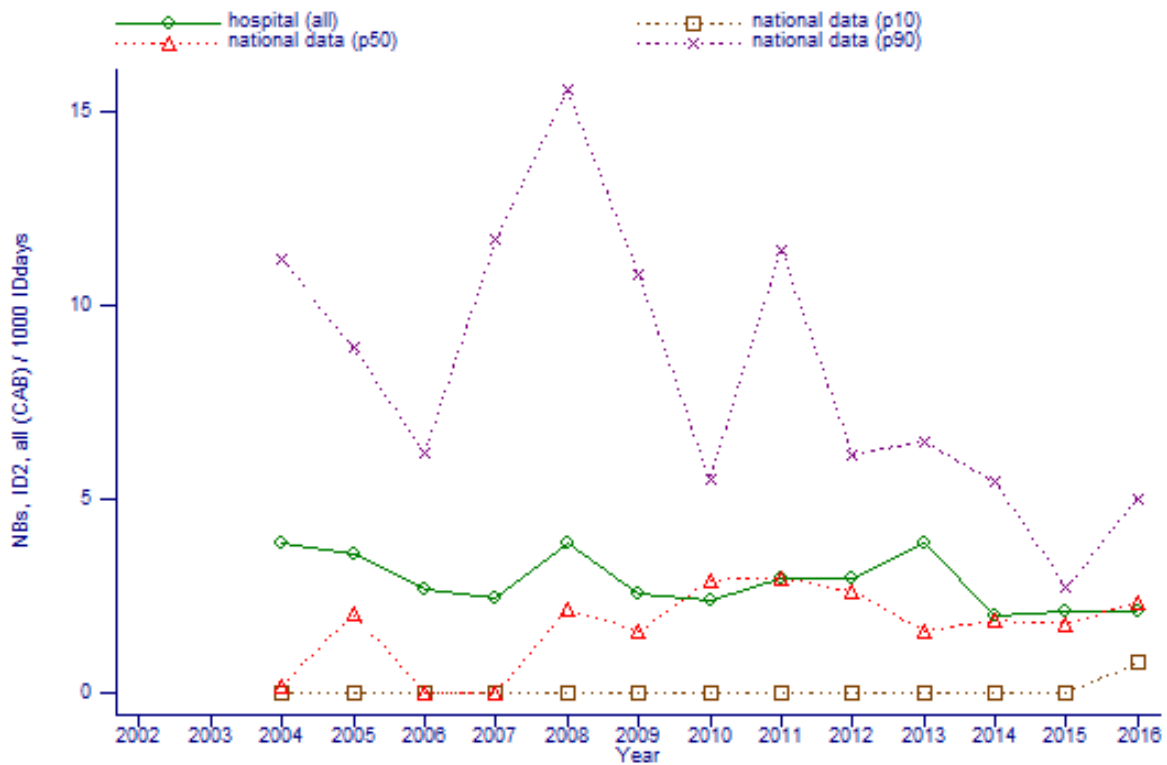


Figure 19: Evolution: NBs, ID2, all / 1000 IDdays ; NBs, with catheter use in 2days preceding onset of infection, all episodes / 1000 catheterdays

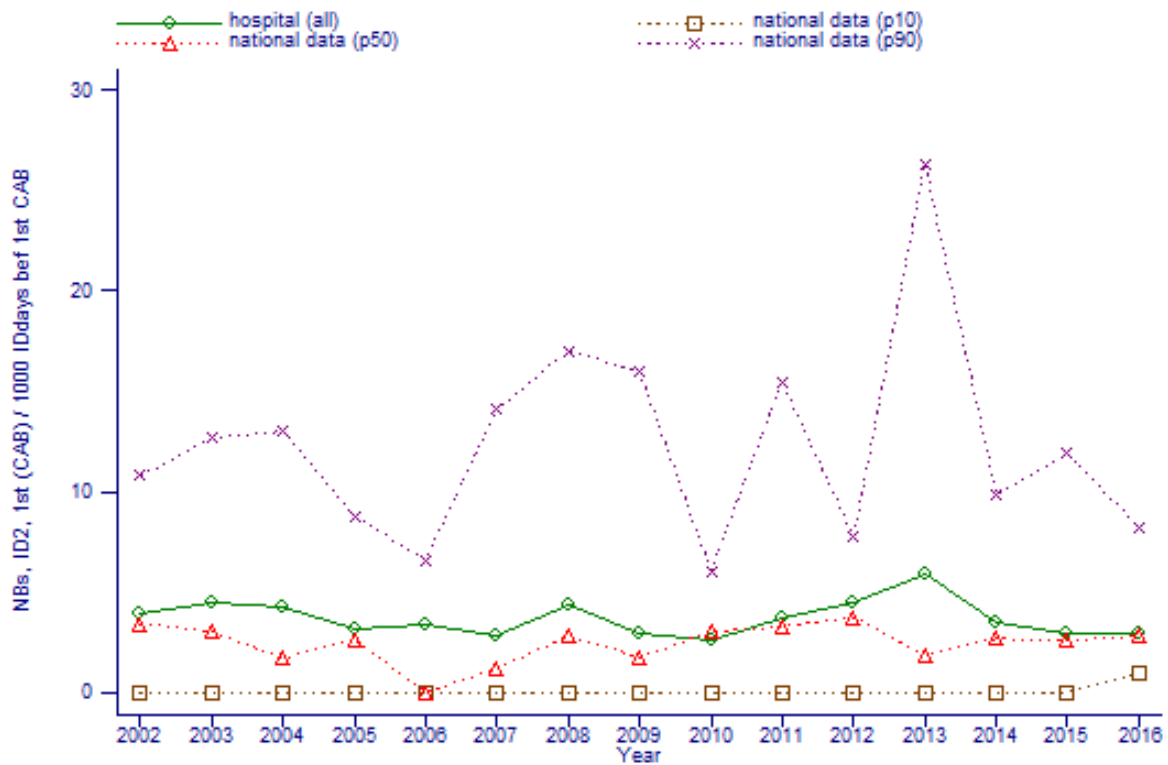


Figure 20: Evolution: NBs, ID2, 1st / 1000 IDdays bef 1st CAB; NBs, with catheter use in 2days preceding onset of infection, 1st episodes only / 1000 catheterdays

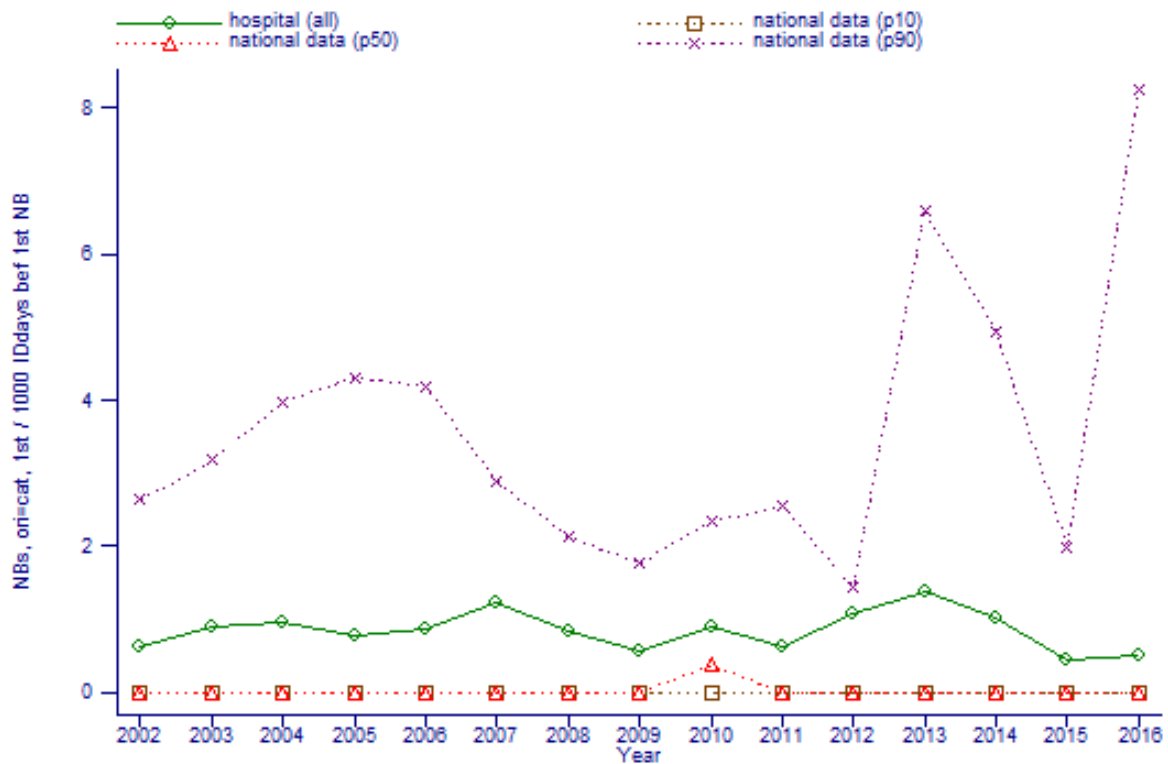


Figure 21: Evolution: NBs, ori=cat, 1st / 1000 IDdays bef 1st NB ; definite catheter associated NBs, 1st episodes only / 1000 catheterdays

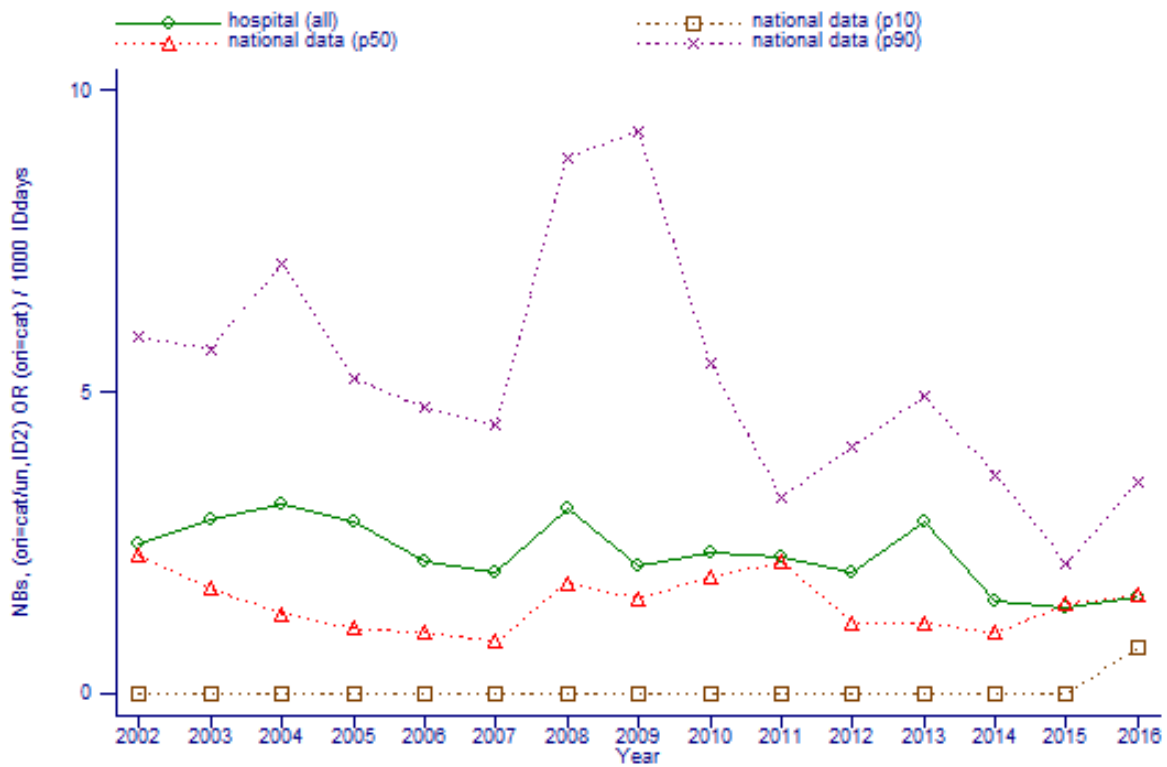


Figure 22: Evolution: NBs, (ori=cat/un,ID2) OR (ori=cat) / 1000 IDdays ; catheter associated NBs / 1000 catheterdays (CDC)

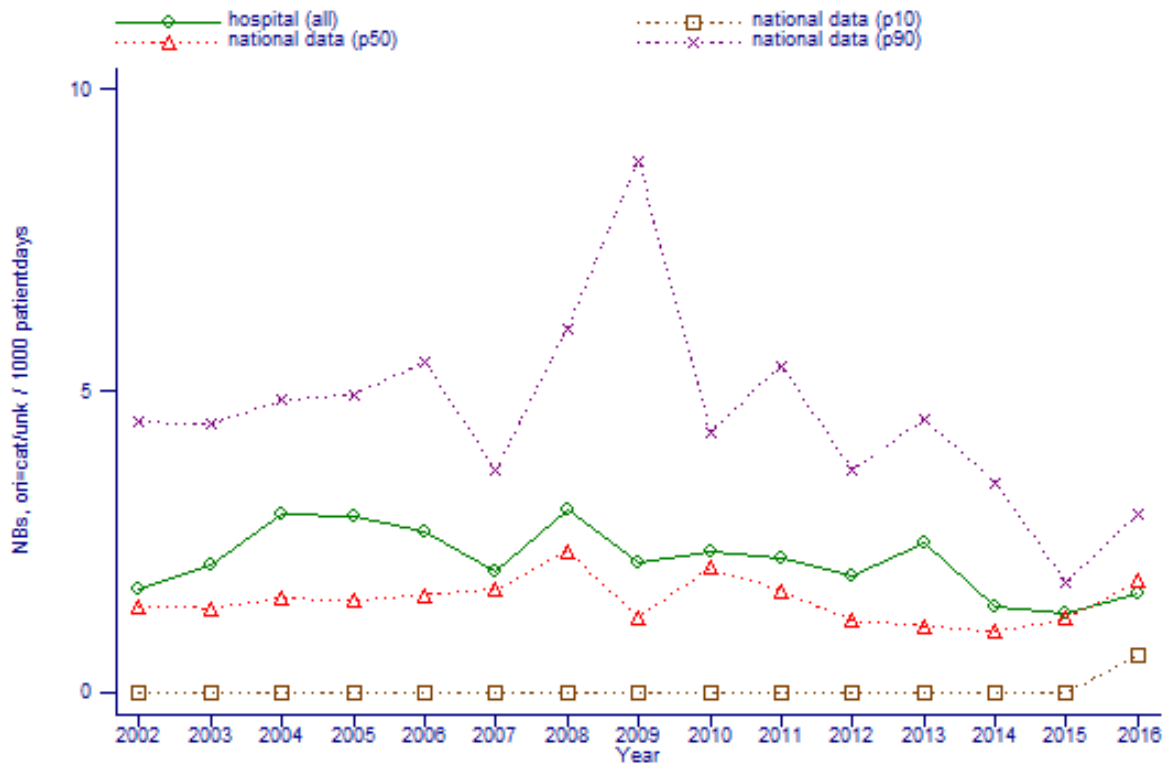


Figure 23: Evolution: NBs, ori=cat/unk / 1000 patientdays ; primary NBs / 1000 patientdays

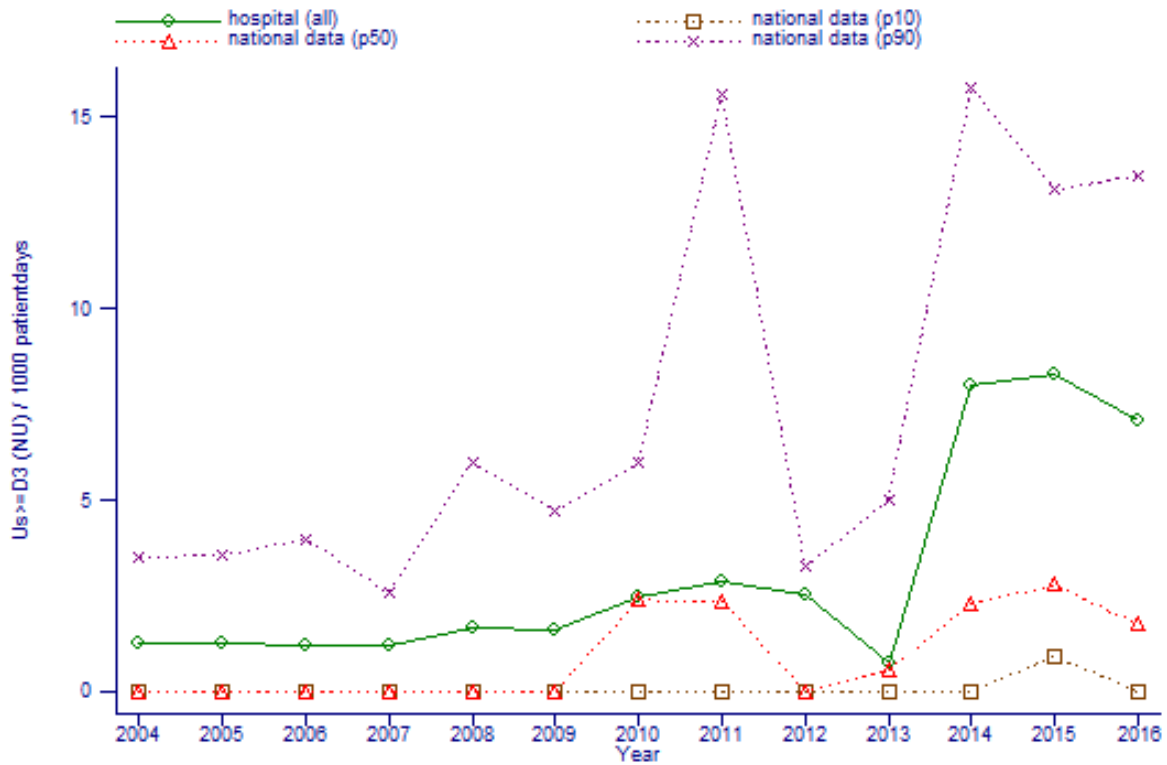


Figure 24: Evolution: $Us \geq D3$ (NU) / 1000 patientdays ; NUs / 1000 patientdays

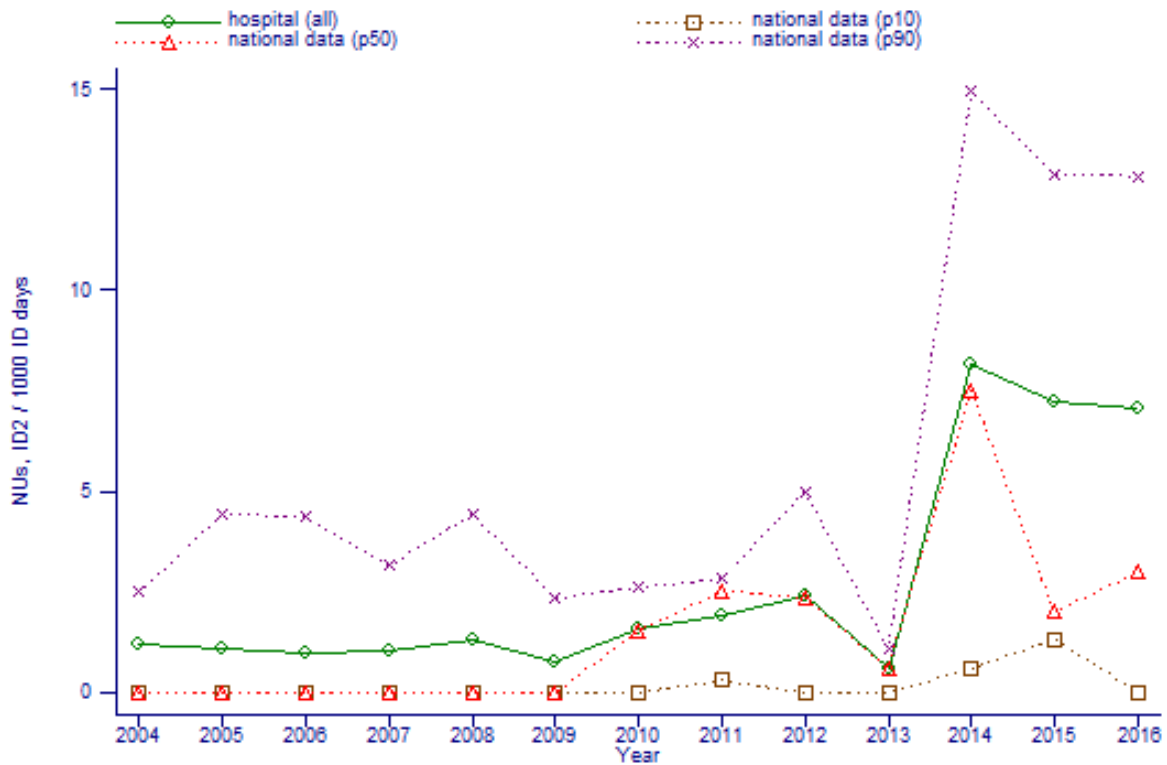


Figure 25: Evolution: NUs, ID2 / 1000 ID days ; catheter associated NUs / 1000 urinary catheterdays