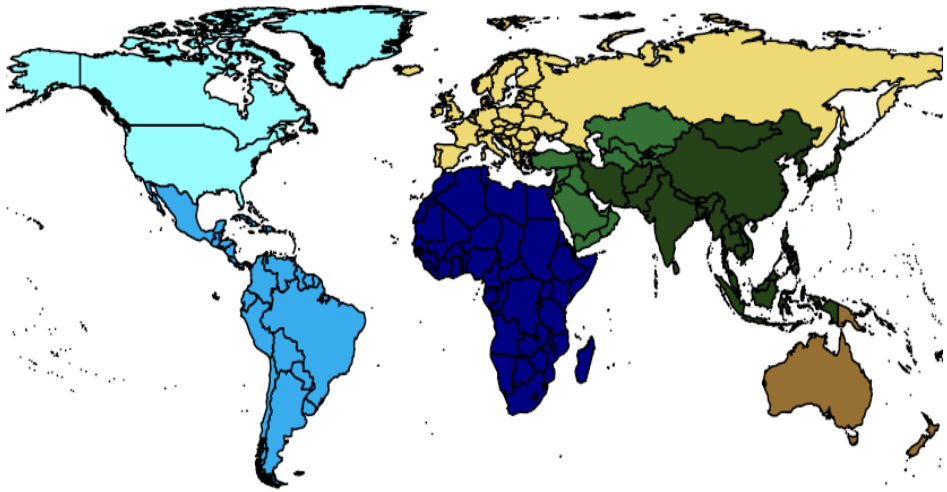
Global Point Prevalence Survey of Antimicrobial Consumption and Resistance

Hospital ID: unknown
Survey: 2020−P3
Reference data: 2019

Participation to Global−PPS by UN macro−geographical regions

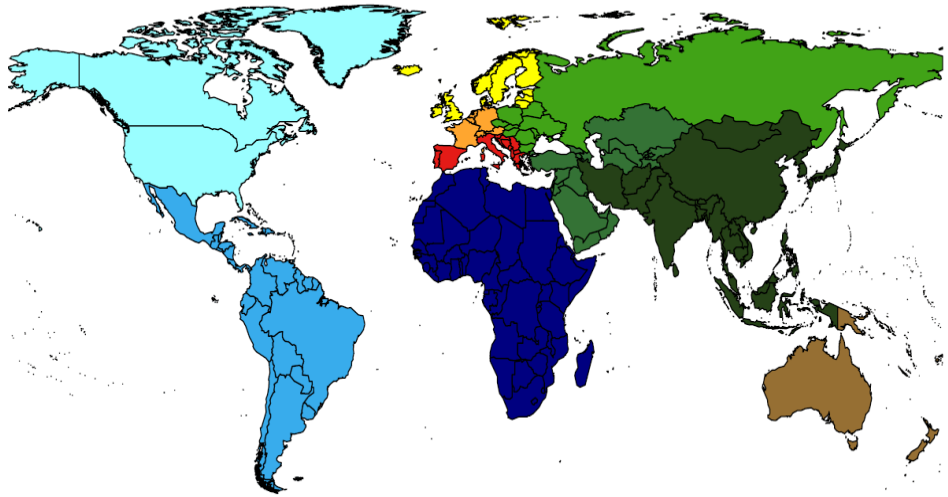
	Number of countries	Number of hospitals
North America	1	18
South America	3	23
Africa	11	53
Europe	9	106
West & Central Asia	6	20
East & South Asia	9	69
Australia & New Zealand	0	0



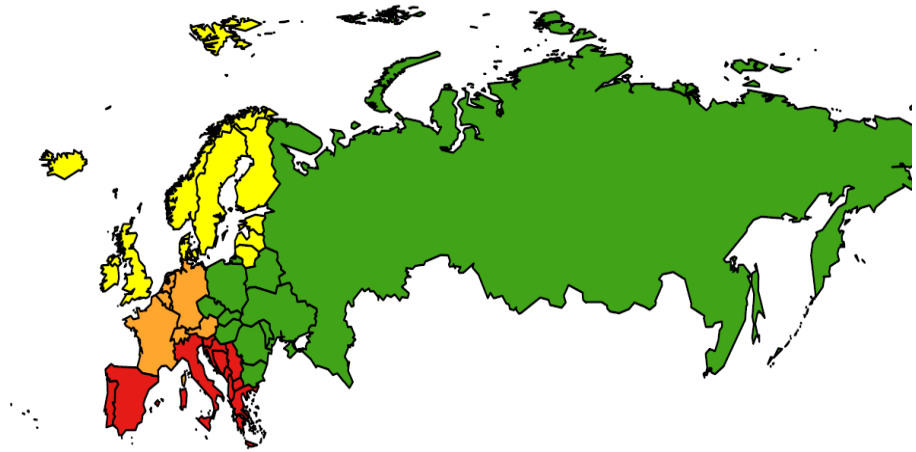
North America
Latin America
Africa
West & Central Asia
East & South Asia
Europe
Australia & New Zealand

Participation to Global−PPS by UN macro−geographical subregion

	Number of countries	Number of hospitals
North America	1	18
South America	3	23
Africa	11	53
North Europe	2	14
West Europe	4	87
South Europe	3	5
East Europe	0	0
West & Central Asia	6	20
East & South Asia	9	69
Australia & New Zealand	0	0



- North America
- Latin America
- Africa
- North Europe
- West Europe
- South Europe
- East Europe
- West & Central Asia
- East & South Asia
- Australia & New Zealand



Explanatory notes for this feedback report

Below each slide extra information is provided to help you to correctly interpret the results.

The slides present the results for your hospital, your country, your region according to the UN classification, merged results on the hospital type for your region and Europe.

Below each slide you find the designation of your own country, your region and hospital type displayed.

If there are less than three participating hospitals for your country for the reported year, results at country level are not displayed.

Overall antimicrobial prevalence by region and type of adult ward

	Total	AMW	HO−AMW	T−AMW	P−AMW	ASW	AICU
North America	30.7	25.6	47.5	0.0	48.8	36.8	47.7
South America	46.8	45.6	88.5	48.6	60.0	41.7	55.1
Africa	55.5	54.5	58.8	71.4	76.2	54.6	78.5
North Europe	38.0	33.6	63.9	0.0	61.9	40.4	54.8
West Europe	28.2	23.2	38.3	32.1	45.0	30.8	56.2
South Europe	33.5	34.4	75.0	0.0	18.2	26.9	59.9
East Europe	0.0	0.0	0.0	0.0	0.0	0.0	0.0
West & Central Asia	59.0	54.7	57.1	33.3	0.0	63.4	67.2
East & South Asia	49.1	45.6	50.1	68.3	55.1	52.5	64.8
Australia & New Zealand	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Our hospital 2020−P3	55.1	51.4	70.5	100.0	51.5	55.5	52.5
Country	46.7	44.3	53.7	89.5	44.2	48.6	66.9

Antimicrobial prevalence (%): 100*(number of treated patients/number of registered patients according to UN macro−geographical subregions).
Total = Overall antimicrobial prevalence in adult wards; AMW = Adult Medical Ward; HO−AMW = Haematology−Oncology AMW;
T−AMW = Transplant (BMT/solid) AMW; P−AMW = Pneumology AMW; ASW = Adult Surgical Ward; AICU = Adult Intensive Care Unit.

Overall antimicrobial prevalence by region and type of child or neonatal ward

	Total	PMW	HO−PMW	T−PMW	PSW	PICU	NMW	NICU
North America	26.8	30.9	57.1	0.0	58.8	26.5	7.3	20.3
South America	47.9	40.1	0.0	0.0	85.7	74.6	0.0	39.5
Africa	70.9	70.7	64.9	100.0	74.2	76.7	69.6	69.4
North Europe	32.8	36.6	40.0	50.0	44.1	72.0	9.1	19.2
West Europe	28.0	31.6	80.6	100.0	42.1	48.4	9.1	18.0
South Europe	26.6	23.1	40.6	0.0	23.9	57.1	33.3	15.8
East Europe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
West & Central Asia	15.9	16.9	80.0	0.0	64.1	44.4	7.4	75.4
East & South Asia	57.2	57.9	50.2	71.4	70.7	77.3	32.2	61.4
Australia & New Zealand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Our hospital 2020−P3	24.3	35.7	100.0	100.0	0.0	66.7	0.0	11.8
Country	32.6	36.9	77.8	100.0	0.0	62.5	4.4	33.3

Antimicrobial prevalence (%): 100*(number of treated patients/number of registered patients according to UN macro−geographical subregions).
Total = Overall antimicrobial prevalence in wards admitting children and neonates; PMW = Paediatric Medical Ward;
HO−PMW = Haematology−Oncology PMW; T−PMW = Transplant (BMT/solid) PMW; PSW = Paediatric Surgical Ward;
PICU = Paediatric Intensive Care Unit; NMW = Neonatal Medical Ward; NICU = Neonatal Intensive Care Unit.

Antimicrobial prevalence in adult wards

	Total	AMW	HO−AMW	T−AMW	P−AMW	ASW	AICU
Our hospital 2020−P3							
patients (N)	809	469	88	14	33	146	59
treated patients (%)	55.1	51.4	70.5	100	51.5	55.5	52.5
Country							
patients (N)	3972	2681	123	19	104	888	157
treated patients (%)	46.7	44.3	53.7	89.5	44.2	48.6	66.9
Continent							
patients (N)	20774	12992	667	41	138	5316	1620
treated patients (%)	49.1	45.6	50.1	68.3	55.1	52.5	64.8
Hospital type							
patients (N)	16315	9558	667	41	129	4618	1302
treated patients (%)	52	50	50.1	68.3	53.5	52.7	64.8
Europe							
patients (N)	24366	14565	983	56	880	6684	1198
treated patients (%)	29.4	24.7	40.6	32.1	45.6	31	56.7

Patients (N) = number of admitted adults.
Treated patients (%) = 100*(number of adults treated with at least one antimicrobial/number of admitted adults).

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Antimicrobial prevalence in paediatric wards

	Total	PMW	HO−PMW	T−PMW	PSW	PICU
Our hospital 2020−P3						
patients (N)	51	42	2	4	0	3
treated patients (%)	45.1	35.7	100	100	0	66.7
Country						
patients (N)	87	65	9	5	0	8
treated patients (%)	47.1	36.9	77.8	100	0	62.5
Continent						
patients (N)	3033	2316	201	14	321	181
treated patients (%)	60	57.9	50.2	71.4	70.7	77.3
Hospital type						
patients (N)	2050	1654	125	14	100	157
treated patients (%)	62.4	62.2	57.6	71.4	49	77.1
Europe						
patients (N)	2080	1654	144	10	162	110
treated patients (%)	35	31.5	60.4	30	34.6	55.5

Patients (N) = Number of admitted children in the hospital, country, UN macro−geographical region to which the hospital belongs; and the continental results for the hospital type to which the hospital belongs (possible types are primary + seconday level, tertiary level, paediatric and infectious diseases + specialized hospital).
Treated patients (%) = 100*(number of children treated with at least one antimicrobial/number of admitted children).

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Antimicrobial prevalence in neonatal wards

	Total	NMW	NICU
Our hospital 2020−P3			
patients (N)	52	35	17
treated patients (%)	3.8	0	11.8
Country			
patients (N)	57	45	12
treated patients (%)	10.5	4.4	33.3
Continent			
patients (N)	1045	441	604
treated patients (%)	49.1	32.2	61.4
Hospital type			
patients (N)	916	364	552
treated patients (%)	49.2	31	61.2
Europe			
patients (N)	817	516	301
treated patients (%)	12.7	9.5	18.3

Patients (N) = Number of admitted neonates in the hospital, country, UN macro−geographicl region to which the hospital belongs; and the continental results for the hospital type to which the hospital belongs (possible types are primary + seconday level, tertiary level, paediatric and infectious diseases + specialized hospital).
Treated patients (%) = 100*(number of neonates treated with at least one antimicrobial/number of admitted neonates).

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Antimicrobial prevalence (%) by activity

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Adults					
Medical	53.8	46.3	45.2	49.3	27.4
Surgical	58.2	44.6	53.4	53.8	29.6
ICU	52.5	68.4	63.6	63.6	55.3
Children					
Medical	43.6	42.7	57.5	62.2	34.3
Surgical	44.4	100.0	67.1	50.9	30.0
ICU	66.7	62.5	77.6	77.4	55.4
Neonates					
GNMW	0.0	4.4	32.2	31.0	9.5
NICU	11.8	33.3	61.4	61.2	18.3

Antimicrobial prevalence = 100*(number of treated patients/number of admitted patients)
Antimicrobial prevalence by activity for adults, children and neonates separately for the hospital, country, continent to which the hospital belongs; and the continental results for the hospital type to which the hospital belongs (possible types are primary + seconday level, tertiary level, paediatric and infectious diseases + specialized hospital).

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

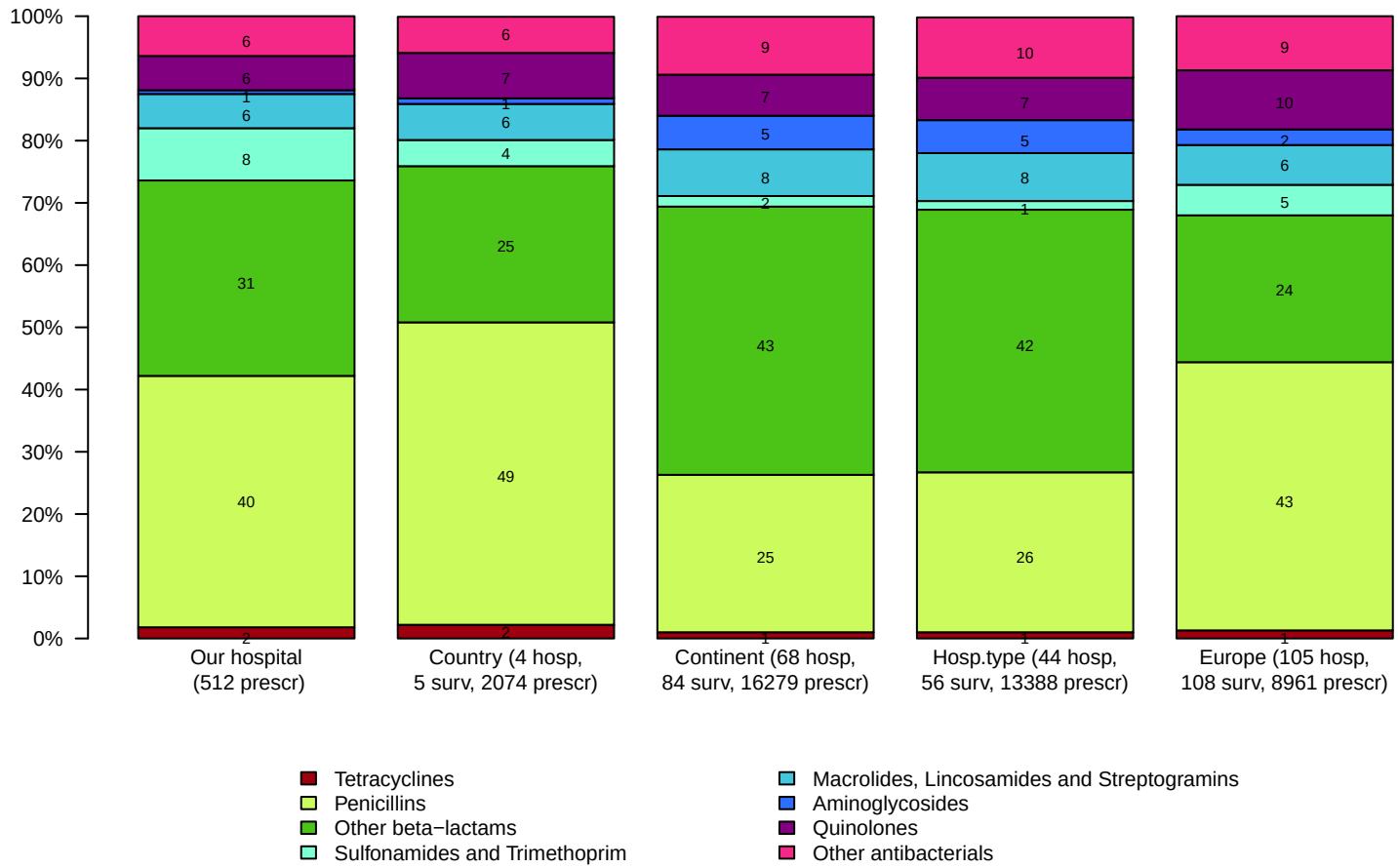
Prevalence of patients prescribed at least one antimicrobial on day of survey

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
N admitted patients (=denominator)	912		4116		24852		19281		27263	
N patients on antimicrobials	471	51.6	1902	46.2	12540	50.5	10216	53.0	7998	29.3
N patients with antibacterials for systemic use	434	47.6	1779	43.2	12190	49.1	9937	51.5	7632	28.0
N patients with antimycotics or antifungals for systemic use	32	3.5	66	1.6	375	1.5	309	1.6	371	1.4
N patients with drugs for treatment of tuberculosis	4	0.4	43	1.0	260	1.0	180	0.9	108	0.4
N patients with antivirals for systemic use	85	9.3	163	4.0	294	1.2	263	1.4	398	1.5
N patients with antibiotics used as intestinal anti−infectives	17	1.9	56	1.4	170	0.7	143	0.7	146	0.5
N patients with nitroimidazole derivatives	8	0.9	40	1.0	280	1.1	210	1.1	128	0.5
N patients with antimalarials	7	0.8	13	0.3	35	0.1	29	0.2	21	0.1

N = number. ATC codes used : antibacterials for systemic use = J01; antimycotics = D01BA; antifungals for systemic use = J02; drug for the treatment of tuberculosis = J04A; antivirals for systemic use = J05; antibiotics used as intestinal anti−infectives = A07A; nitroimidazole derivatives = P01AB; antimalarials = P01B.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Overall proportional antibiotic use



Percentage of antibacterials for systemic use (ATC J01) at ATC3 level (pharmacological subgroup). Proportional antibiotic use below 0.5% is not reported.

hosp = hospitals, surv = surveys, prescr = prescriptions.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Proportional antibiotic use (% of prescriptions)

ATC4	Antibiotics Subgroup	Our Hospital	Country	Continent	Type	Europe
J01AA	Tetracyclines	1.8	2.2	1.0	1.0	1.3
J01CA	Penicillins with extended spectrum	1.8	1.2	6.7	6.3	7.1
J01CE	Beta−lactamase sensitive penicillins	1.4	1.4	1.0	1.0	1.2
J01CF	Beta−lactamase resistant penicillins	1.4	1.1	1.0	1.1	2.9
J01CR	Penicillins incl. beta−lactam. inh.	35.9	45.0	16.5	17.2	31.7
J01DB	First−generation cephalosporins	10.0	8.3	4.8	4.9	8.2
J01DD	Third−generation cephalosporins	11.7	8.5	21.4	20.7	7.1
J01DE	Fourth−generation cephalosporins	1.0	0.8	1.5	1.4	0.7
J01DH	Carbapenems	8.4	6.8	6.0	5.9	3.7
J01EE	Comb. Sulfonamides/trimethoprim	8.4	4.2	1.7	1.4	4.7
J01FA	Macrolides	2.7	4.1	4.5	4.5	4.0
J01FF	Lincosamides	2.7	1.7	3.0	3.3	2.4
J01MA	Fluoroquinolones	5.5	7.3	6.5	6.7	9.5
J01XA	Glycopeptide antibacterials	3.7	2.9	2.9	3.0	3.5
J01XD	Imidazole derivatives	2.3	2.6	5.1	5.4	2.9

Our hospital: 512 prescritions, 434 treated patients; Country: 2074 prescritions, 4 hospitals, 5 surveys

Continent: 16279 prescritions, 68 hospitals, 84 surveys; Type: 13388 prescritions, 44 hospitals, 56 surveys

Europe: 8961 prescritions, 105 hospitals, 108 surveys

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

10 most prescribed ATC4 at country level plus 5 extra ATC4 at hospital level which do not fall within top 10 at country level

Proportional antibiotic use (% of prescriptions) − Adult Medical Ward

ATC4	Antibiotics Subgroup	Our Hospital	Country	Continent	Type	Europe
J01AA	Tetracyclines	1.2	2.5	1.4	1.3	1.4
J01CA	Penicillins with extended spectrum	2.0	1.0	4.7	4.4	8.1
J01CE	Beta−lactamase sensitive penicillins	1.6	0.9	0.5	0.0	1.0
J01CF	Beta−lactamase resistant penicillins	1.6	1.3	0.9	0.9	3.0
J01CR	Penicillins incl. beta−lactam. inh.	39.3	47.8	21.0	22.0	37.6
J01DB	First−generation cephalosporins	8.9	8.3	4.4	4.4	2.1
J01DD	Third−generation cephalosporins	10.1	8.4	20.5	20.1	7.8
J01DE	Fourth−generation cephalosporins	1.2	0.9	1.5	1.4	0.0
J01DH	Carbapenems	8.9	5.4	5.8	5.4	3.1
J01EE	Comb. Sulfonamides/trimethoprim	3.6	2.7	1.6	1.0	3.6
J01FA	Macrolides	2.8	4.4	7.3	7.2	4.7
J01FF	Lincosamides	4.9	1.9	3.3	3.5	2.0
J01MA	Fluoroquinolones	6.9	8.5	8.5	8.7	11.7
J01XA	Glycopeptide antibacterials	4.9	2.7	2.2	2.1	2.1
J01XD	Imidazole derivatives	1.6	2.1	3.4	3.7	1.9

Our hospital: 247 prescritions, 221 treated patients; Country: 1264 prescritions, 4 hospitals, 5 surveys

Continent: 7309 prescritions, 64 hospitals, 79 surveys; Type: 5915 prescritions, 43 hospitals, 54 surveys

Europe: 3814 prescritions, 92 hospitals, 93 surveys

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

10 most prescribed ATC4 at country level plus 5 extra ATC4 at hospital level which do not fall within top 10 at country level

Proportional antibiotic use (% of prescriptions) − Adult Surgical Ward

ATC4	Antibiotics Subgroup	Our Hospital	Country	Continent	Type	Europe
J01AA	Tetracyclines	1.1	1.5	0.0	0.0	1.4
J01CA	Penicillins with extended spectrum	2.2	1.7	3.7	3.0	3.7
J01CE	Beta−lactamase sensitive penicillins	1.1	1.5	1.0	1.1	0.8
J01CF	Beta−lactamase resistant penicillins	2.2	0.0	1.5	1.5	3.7
J01CR	Penicillins incl. beta−lactam. inh.	35.2	45.9	15.0	15.9	23.8
J01DB	First−generation cephalosporins	18.7	11.6	11.4	11.1	24.3
J01DD	Third−generation cephalosporins	11.0	8.9	21.7	22.5	5.0
J01DE	Fourth−generation cephalosporins	1.1	0.0	0.9	0.5	0.5
J01DH	Carbapenems	4.4	5.0	3.7	3.6	2.6
J01EE	Comb. Sulfonamides/trimethoprim	3.3	1.9	0.6	0.5	2.0
J01FF	Lincosamides	2.2	2.3	3.7	3.8	4.4
J01MA	Fluoroquinolones	7.7	7.1	6.2	6.4	9.8
J01XA	Glycopeptide antibacterials	3.3	2.9	2.0	2.1	3.1
J01XD	Imidazole derivatives	4.4	4.6	10.8	11.0	5.1

Our hospital: 91 prescritions, 80 treated patients; Country: 482 prescritions, 4 hospitals, 5 surveys

Continent: 3592 prescritions, 51 hospitals, 64 surveys; Type: 3164 prescritions, 36 hospitals, 47 surveys

Europe: 2338 prescritions, 87 hospitals, 87 surveys

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

10 most prescribed ATC4 at country level plus 5 extra ATC4 at hospital level which do not fall within top 10 at country level

Proportional antibiotic use (% of prescriptions) − [Adult] Intensive Care Unit

ATC4	Antibiotics Subgroup	Our Hospital	Country	Continent	Type	Europe
J01AA	Tetracyclines	2.2	2.3	2.0	2.0	0.6
J01CA	Penicillins with extended spectrum	2.2	0.8	3.7	3.0	2.1
J01CF	Beta−lactamase resistant penicillins	2.2		0.5	0.6	1.5
J01CR	Penicillins incl. beta−lactam. inh.	22.2	38.9	15.2	15.5	40.1
J01DB	First−generation cephalosporins	13.3	4.6	2.5	2.7	7.5
J01DD	Third−generation cephalosporins	17.8	8.4	17.6	16.7	6.8
J01DH	Carbapenems	17.8	20.6	15.4	15.4	8.8
J01FA	Macrolides	4.4	6.1	4.2	4.2	3.9
J01MA	Fluoroquinolones	4.4	2.3	6.3	6.3	4.9
J01XA	Glycopeptide antibacterials	8.9	6.1	6.4	6.9	6.9
J01XD	Imidazole derivatives	4.4	1.5	5.3	5.4	3.5

Our hospital: 45 prescritions, 31 treated patients; Country: 131 prescritions, 4 hospitals, 5 surveys

Continent: 1502 prescritions, 56 hospitals, 70 surveys; Type: 1247 prescritions, 38 hospitals, 50 surveys

Europe: 840 prescritions, 77 hospitals, 77 surveys

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

10 most prescribed ATC4 at country level plus 5 extra ATC4 at hospital level which do not fall within top 10 at country level

Proportional antibiotic use (% of prescriptions) − Paediatric Medical Ward

ATC4	Antibiotics Subgroup	Our Hospital	Country	Continent	Type	Europe
J01AA	Tetracyclines	5.3		0.5	0.7	0.5
J01CR	Penicillins incl. beta−lactam. inh.	26.3		10.1	10.2	22.8
J01DB	First−generation cephalosporins	5.3		0.0	0.0	1.6
J01DC	Second−generation cephalosporins	5.3		15.0	13.2	5.1
J01DD	Third−generation cephalosporins	26.3		26.9	26.5	14.6
J01DH	Carbapenems	5.3		2.5	2.6	2.6
J01EE	Comb. Sulfonamides/trimethoprim	5.3		0.9	1.0	5.9
J01GB	Other aminoglycosides	5.3		12.1	12.7	3.7
J01MA	Fluoroquinolones	5.3		1.3	1.2	1.6
J01XD	Imidazole derivatives	5.3		2.1	1.8	2.1
J01XX	Other antibacterials	5.3		0.0	0.0	0.0

Our hospital: 19 prescritions, 15 treated patients; Country: 29 prescritions, 1 hospitals, 1 surveys

Continent: 1696 prescritions, 39 hospitals, 49 surveys; Type: 1315 prescritions, 28 hospitals, 35 surveys

Europe: 624 prescritions, 67 hospitals, 69 surveys

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

10 most prescribed ATC4 at country level plus 5 extra ATC4 at hospital level which do not fall within top 10 at country level

Therapeutic antimicrobial use for community acquired and healthcare associated infections by type of treatment

	CAI Empiric		CAI Targeted		CAI Total	
	N	%	N	%	N	%
Our hospital 2020−P3	176	66.9	87	33.1	263	58.7
Country	1083	71.6	430	28.4	1513	71.2
Continent	7899	85.4	1350	14.6	9249	78.1
Hospital type	6366	85.9	1045	14.1	7411	77.2

	HAI Empiric		HAI Targeted		HAI Total	
	N	%	N	%	N	%
Our hospital 2020−P3	106	57.3	79	42.7	185	41.3
Country	392	64.1	220	35.9	612	28.8
Continent	1758	67.8	836	32.2	2594	21.9
Hospital type	1482	67.6	709	32.4	2191	22.8

CAI= Community Acquired Infections; HAI=Healthcare Associated Infections
Type of treatment= empiric versus targeted treatment.
For each subgroup of therapeutic use (CAI or HAI) the number of antimicrobials and proportion (%) for empiric versus targeted prescribing is reported.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Prophylactic antimicrobial use by indication

	Medical		Surgical	
	N	%	N	%
Our hospital 2020−P3	167	72.0	65	28.0
Country	197	61.2	125	38.8
Continent	1777	34.0	3457	66.0
Hospital type	1426	33.5	2831	66.5

Percentage of antimicrobials prescribed for medical or surgical prophylaxis. Antimicrobials include the antibacterials, antifungals and antivirals for systemic use as well as antibiotics used as intestinal anti−infectives and drugs to treat tuberculosis.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Ten most common diagnoses treated with therapeutic antimicrobials

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
Diagnosis	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Pneu	85	22.6	470	26.9	3065	37.0	2455	36.8	1744	27.3
SST	64	17.0	278	15.9	960	11.6	806	12.1	600	9.4
IA	33	8.8	172	9.8	473	5.7	399	6.0	587	9.2
Cys	28	7.4	125	7.1	414	5.0	348	5.2	442	6.9
Pye	24	6.4	119	6.8	376	4.5	280	4.2	513	8.0
BJ	23	6.1	78	4.5	176	2.1	149	2.2	295	4.6
PUO	16	4.3	28	1.6	124	1.5	83	1.2	110	1.7
BAC	15	4.0	24	1.4	132	1.6	113	1.7	105	1.6
ENT	10	2.7	26	1.5	138	1.7	122	1.8	181	2.8
FN	10	2.7	17	1.0	94	1.1	86	1.3	106	1.7

Top ten diagnoses in our hospital. Count on the number of diagnoses treated with at least one antimicrobal.
This implies that a patient with multiple diagnoses can be counted several times. Prophylactic prescribing and patients admitted on NICU or NMW are excluded from this analysis.

Country: Country Continent: Continent Hospital type: Tertiary hospital

CNS=infection of central nervous system; Eye=eye infections; ENT=ear, nose and throat infections; URTI=upper respiratory tract infection; Bron=bronchitis; Pneu=Pneumonia or lower respiratory tract infection; TB=tuberculosis; CVS=cardiovascular system infections; GI=gastro−intestinal infections; IA=intra−abdominal sepsis; SST=skin and soft tissue; BJ=bone/joint infections; Cys=lower urinary tract infection; Pye=Upper urinary tract infection; OBGY=obstetric/gynaecological infections; GUM=genito−urinary males; BAC=bacteraemia; PUO=pyrexia of unknown origin; PUO−HO=fever syndrome in non−neutropaenic haematology−oncology patient; FN=fever neutropaenic patient; LYMPH=infection lymphatics

Summary of quality indicators for antibiotic use

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
Medical										
Reason in notes	222	75.8	1353	94.7	7322	79.2	5921	79.6	5030	89.2
Guidelines missing	56	19.1	239	16.7	724	7.8	662	8.9	277	4.9
Guideline compliant	171	83.4	782	74.9	4802	74.2	3779	74.1	3808	83.1
Stop/review date documented	166	56.7	832	58.3	4021	43.5	3268	44.0	2495	44.2
Surgical										
Reason in notes	113	66.9	416	83.2	3105	68.0	2740	71.6	1879	80.8
Guidelines missing	29	17.2	83	16.6	1059	23.2	847	22.1	111	4.8
Guideline compliant	98	81.0	255	72.6	1423	53.6	1209	53.9	1460	78.0
Stop/review date documented	109	64.5	261	52.2	1480	32.4	1305	34.1	1261	54.2
ICU										
Reason in notes	33	66.0	138	94.5	1863	75.5	1632	76.7	863	86.6
Guidelines missing	7	14.0	18	12.3	237	9.6	205	9.6	70	7.0
Guideline compliant	30	96.8	89	84.0	992	68.8	821	67.5	610	87.5
Stop/review date	36	72.0	78	53.4	933	37.8	801	37.7	419	42.1

Antibiotic quality indicators by activity (medical, surgery, ICU) for all patients receiving antibacterials for systemic use (ATC J01).

- For reason in notes and stop/review date documented: Count at antibacterial level.
- For guidelines missing: Count on NA (= no guideline for an indication) at patient level and diagnosis over total scores for this indicator.
- For guideline compliance: Count at patient level and diagnosis for compliance= yes or no only. For combination therapy with >1 antibiotic: if 1 antibiotic by diagnosis is not compliant, this combination therapy as a whole for this diagnosis will be counted as non−compliant.

Antibiotic quality indicators − adult wards

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
Medical										
Reason in notes	209	76.3	1317	94.8	5672	79.3	4615	79.3	4272	88.6
Guidelines missing	50	18.2	239	17.2	681	9.5	625	10.7	206	4.3
Guideline compliant	163	83.6	750	74.3	3689	74.0	2920	73.8	3287	82.3
Stop/review date documented	158	57.7	818	58.9	3212	44.9	2647	45.5	2180	45.2
Surgical										
Reason in notes	112	68.3	410	83.0	2921	69.1	2662	71.6	1819	80.7
Guidelines missing	25	15.2	83	16.8	882	20.9	845	22.7	95	4.2
Guideline compliant	97	80.8	251	72.5	1348	53.1	1160	53.6	1427	78.1
Stop/review date documented	106	64.6	261	52.8	1410	33.3	1254	33.7	1220	54.1
ICU										
Reason in notes	30	66.7	123	94.6	1244	80.4	1065	81.2	713	85.9
Guidelines missing	2	4.4	18	13.8	183	11.8	171	13.0	40	4.8
Guideline compliant	30	96.8	77	81.9	669	69.6	532	67.7	526	86.7
Stop/review date documented	32	71.1	65	50.0	642	41.5	542	41.3	358	43.1

Antibiotic quality indicators by activity (medical, surgical, ICU) for patients admitted on adult wards receiving antibacterials for systemic use (ATC J01).

− For reason in notes and stop/review date documented: Count at antibacterial level.

− For guidelines missing: Count on NA (= no guideline for an indication) at patient level and diagnosis over total scores for this indicator.

− For guideline compliance: Count at patient level and diagnosis for compliance = yes or no only. For combination therapy with >1 antibiotic: if 1 antibiotic by diagnosis is not compliant, this combination therapy as a whole for this diagnosis will be counted as non−compliant.

Antibiotic quality indicators − paediatric and neonatal wards

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
Medical										
Reason in notes	13	68.4			1650	78.9	1306	80.9	758	92.9
Guidelines missing	6	31.6			43	2.1	37	2.3	71	8.7
Guideline compliant	8	80.0			1113	75.2	859	75.2	521	88.3
Stop/review date documented	8	42.1			809	38.7	621	38.5	315	38.6
Surgical										
Reason in notes	1	20.0			184	54.9	78	70.9	60	84.5
Guidelines missing	4	80.0			177	52.8	2	1.8	16	22.5
Guideline compliant	1	100.0			75	65.8	49	62.8	33	73.3
Stop/review date documented	3	60.0			70	20.9	51	46.4	41	57.7
ICU										
Reason in notes	3	60.0			619	67.1	567	69.6	150	90.4
Guidelines missing	5	100.0			54	5.9	34	4.2	30	18.1
Guideline compliant	0	0.0			323	67.2	289	67.1	84	93.3
Stop/review date documented	4	80.0			291	31.6	259	31.8	61	36.7

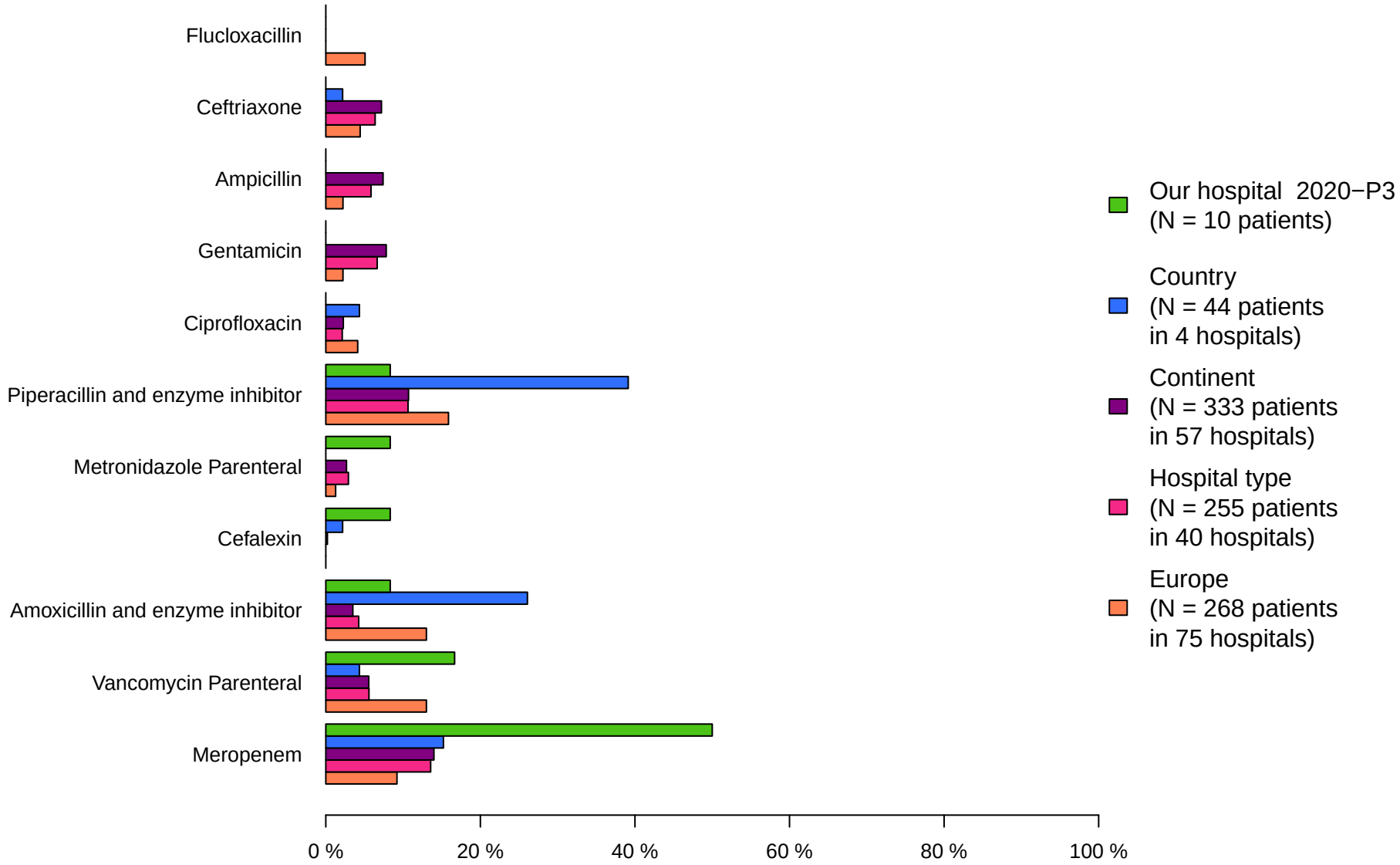
Antibiotic quality indicators by activity (medical, surgical, ICU) for patients admitted on paediatric and neonatal wards receiving antibacterials for systemic use (ATC J01).

− For reason in notes and stop/review date documented: Count at antibacterial level.

− For guidelines missing: Count on NA (= no guideline for an indication) at patient level and diagnosis over total scores for this indicator.

− For guideline compliance: Count at patient level and diagnosis for compliance = yes or no only. For combination therapy with >1 antibiotic: if 1 antibiotic by diagnosis is not compliant, this combination therapy as a whole for this diagnosis will be counted as non−compliant.

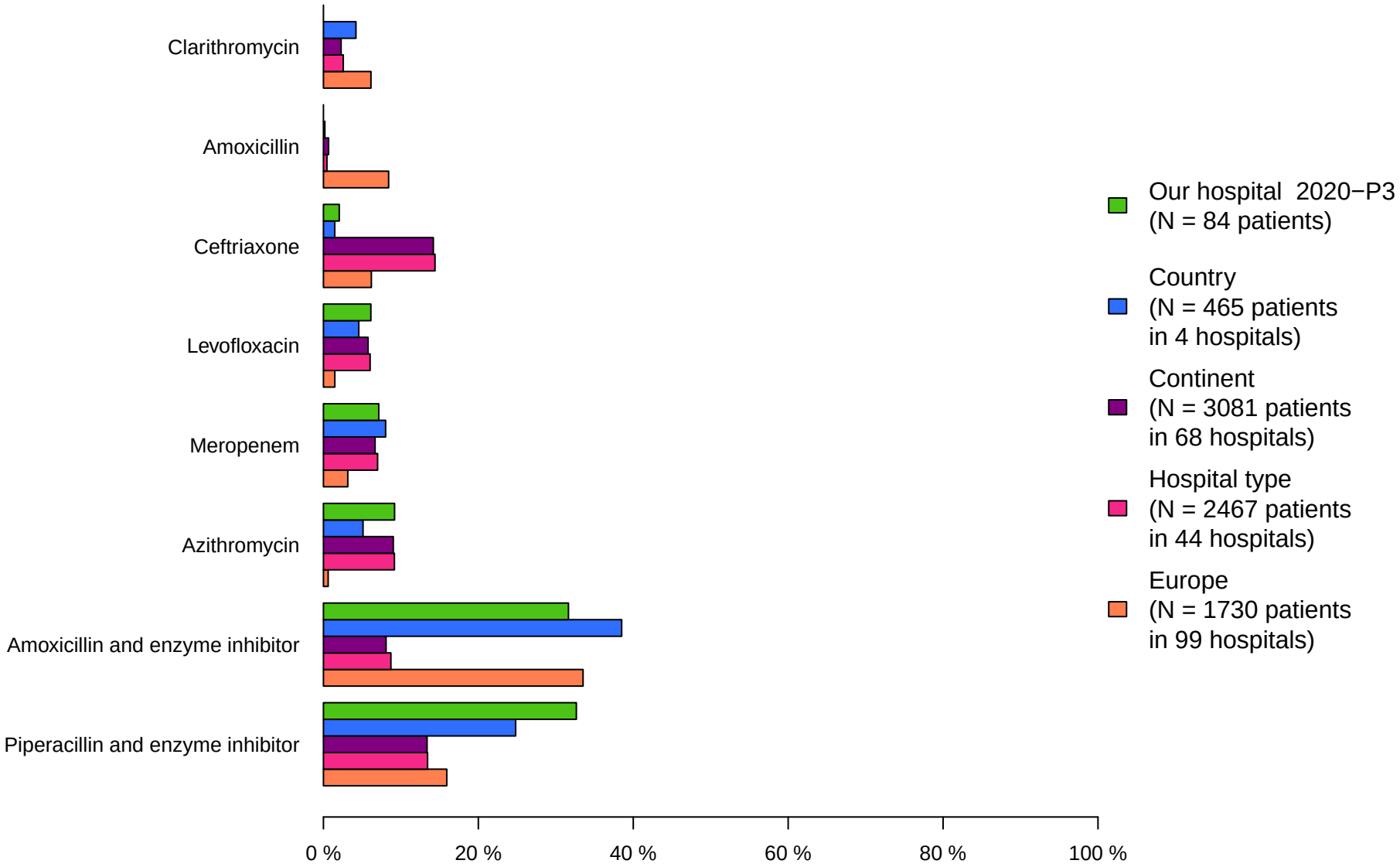
Top 5 most frequently used antibiotics for sepsis in adults and children



Selection on antibacterials for systemic use (J01). Top 5 most prescribed antibiotics (ATC5, substance level) for sepsis at hospital level, supplemented with the most prescribed antibiotics at country, continental and hospital type level if they do not fall within top 5 of the hospital. Selection on diagnostic code = sepsis; All patients are included with exception of patients admitted on NMW and NICU.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

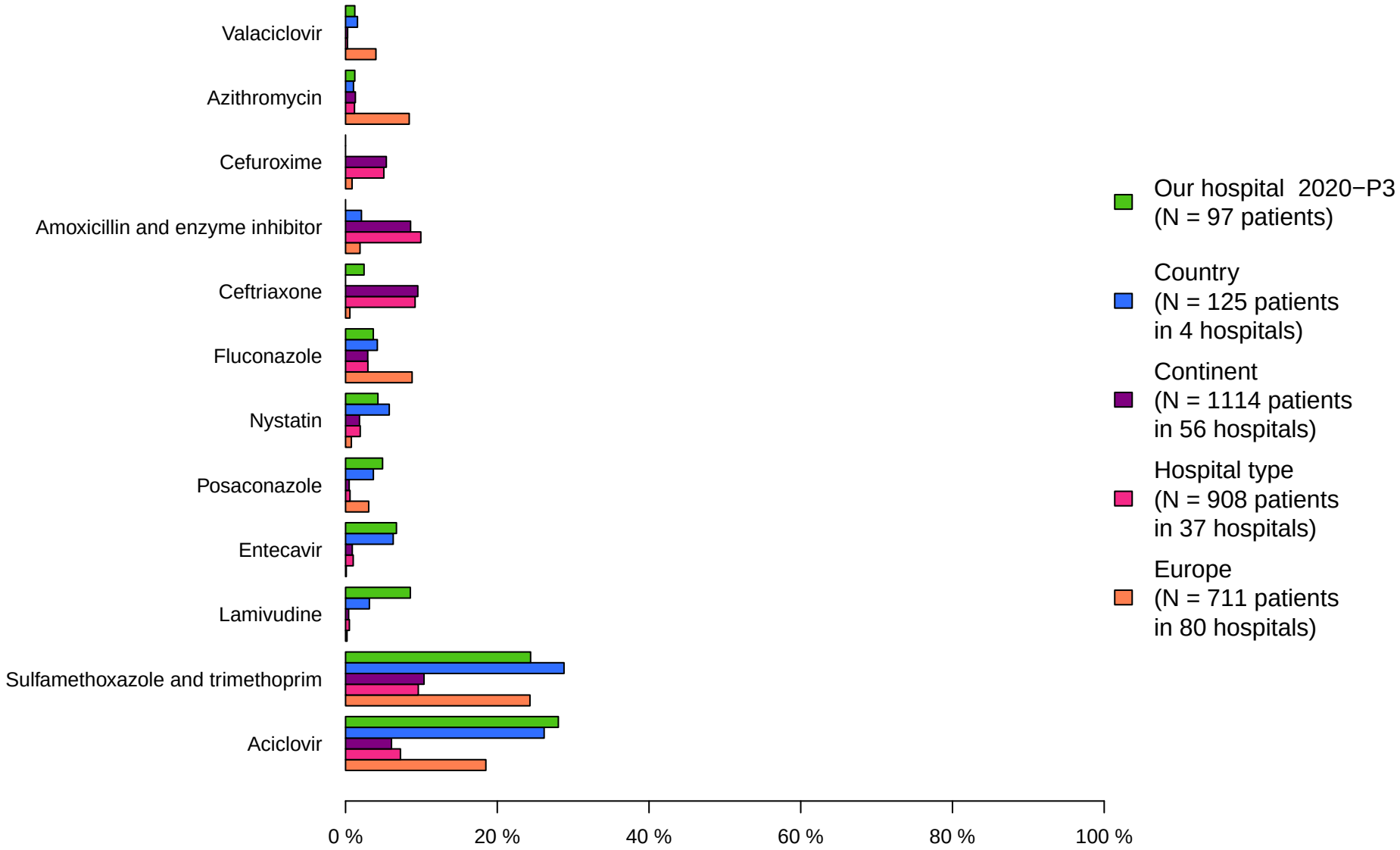
Top 5 most frequently used antibiotics for pneumonia in adults and children



Selection on antibacterials for systemic use (J01). Top 5 most prescribed antibiotics (ATC5, substance level) for pneumonia at hospital level, supplemented with the most prescribed antibiotics at country, continent and hospital type level if they do not fall within top 5 of the hospital.
Selection on diagnostic code = pneu; All patients are included with exception of patients admitted on NMW and NICU.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

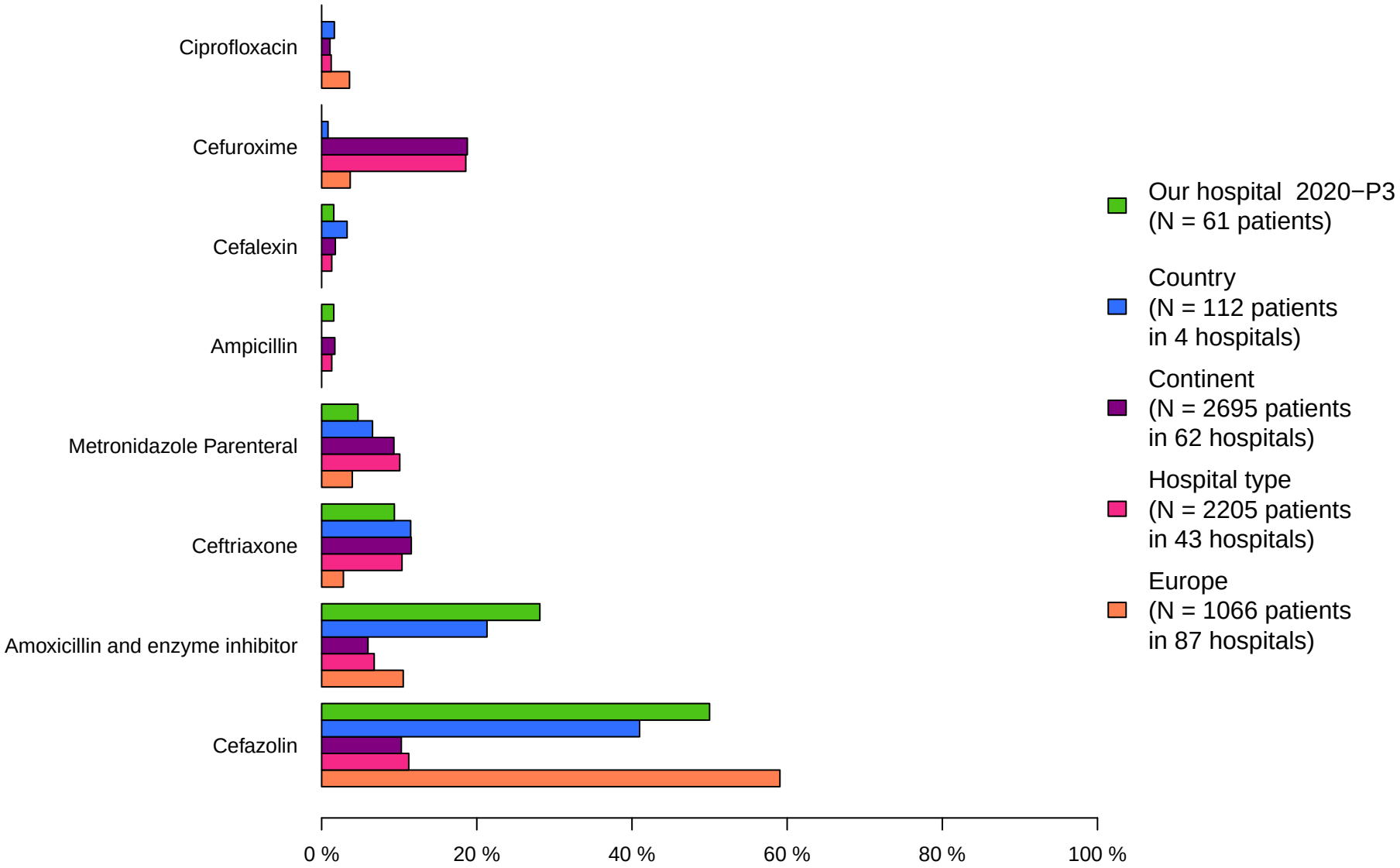
Top 5 most frequently used antimicrobials for medical prophylaxis in adults and children



Top 5 most prescribed antimicrobials (ATC5, substance level) for medical prophylaxis at hospital level, supplemented with the most prescribed antimicrobials at country, continent and hospital type level if they do not fall within top 5 of the hospital.
Selection on indication = MP; All patients are included with exception of patients admitted on NMW and NICU.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

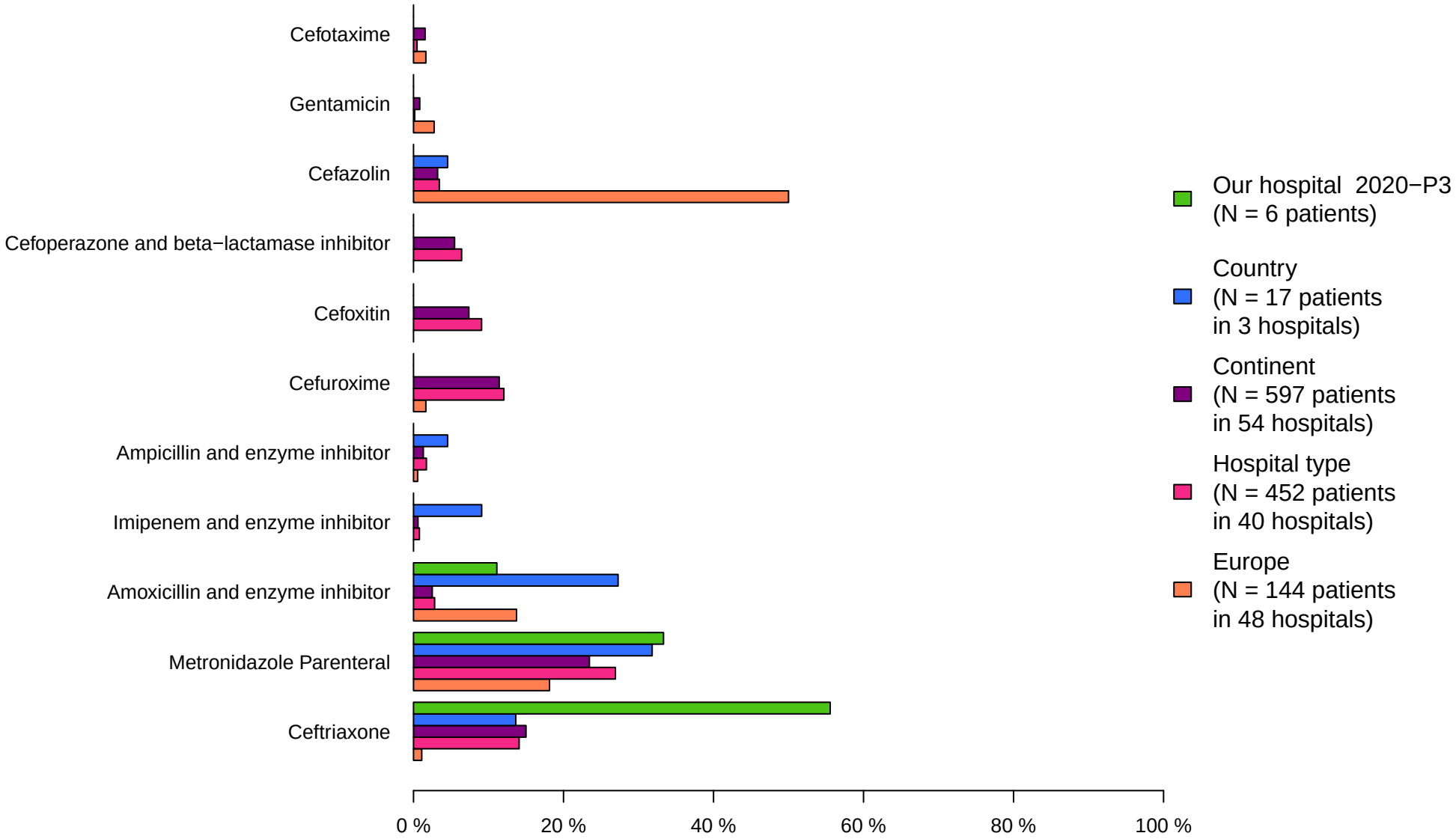
Top 5 most frequently used antibiotics for surgical prophylaxis in adults and children



Top 5 most prescribed antibacterials for systemic use (ATC code J01) for surgical prophylaxis use at hospital level, supplemented with the most prescribed antibiotics at country, continent and hospital type level if they do not fall within the top 5 of the hospital. Selection on indication = SP; All patients are included with exception of patients admitted on NMW and NICU.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

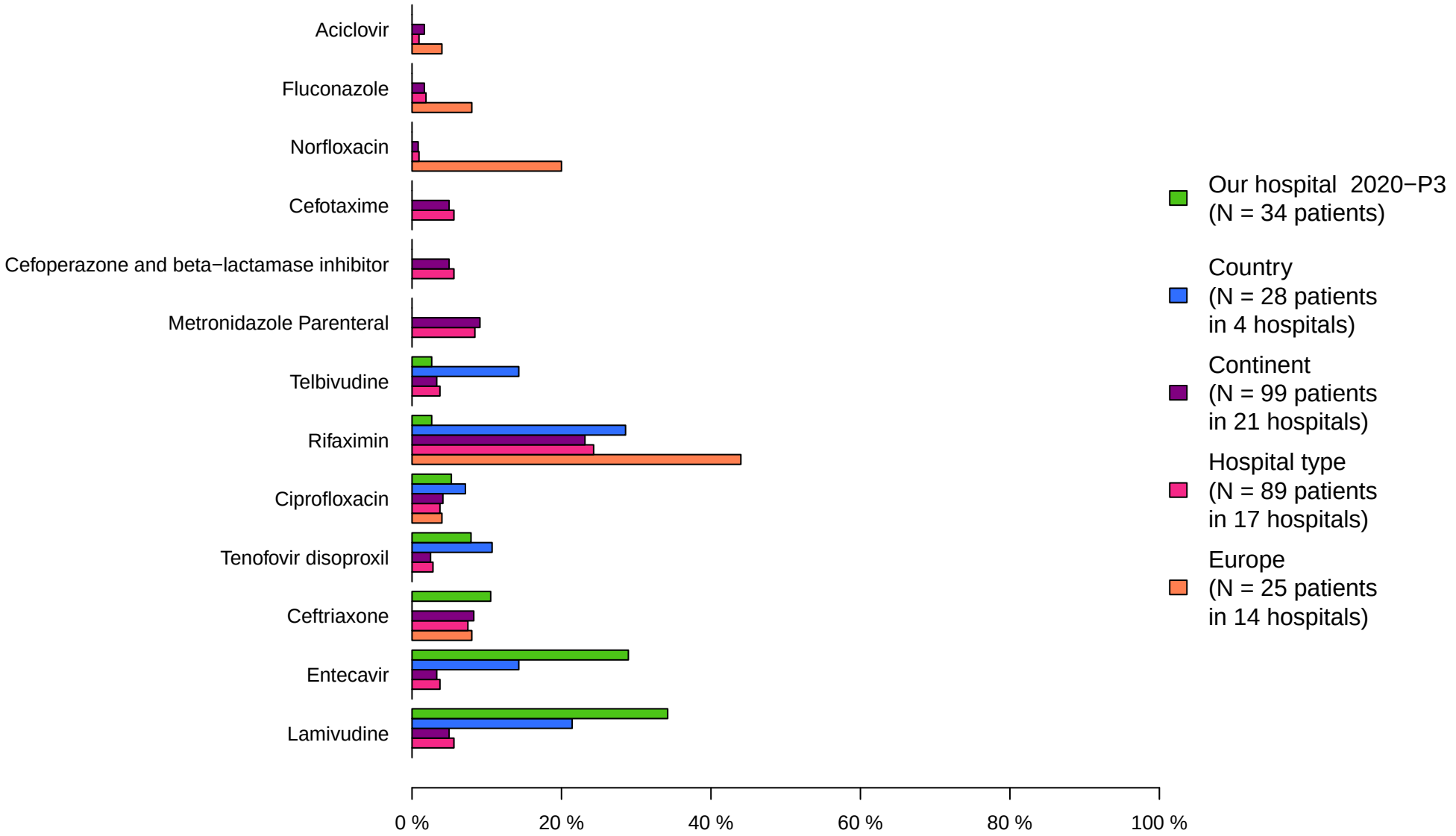
Top 5 most frequently used antibiotics for surgical prophylaxis of the gastro−intestinal tract in adults and children



Selection on antibacterials for systemic use (J01). Top 5 antibiotics (ATC5, substance level) prescribed for surgical prophylaxis of the gastro−intestinal tract at hospital level, supplemented with the most prescribed antibiotics at country, continent and hospital type level if they do not fall within top 5 of the hospital. Selection on diagnostic code = Proph GI and indication = SP; All patients are included with exception of patients admitted on NMW and NICU.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

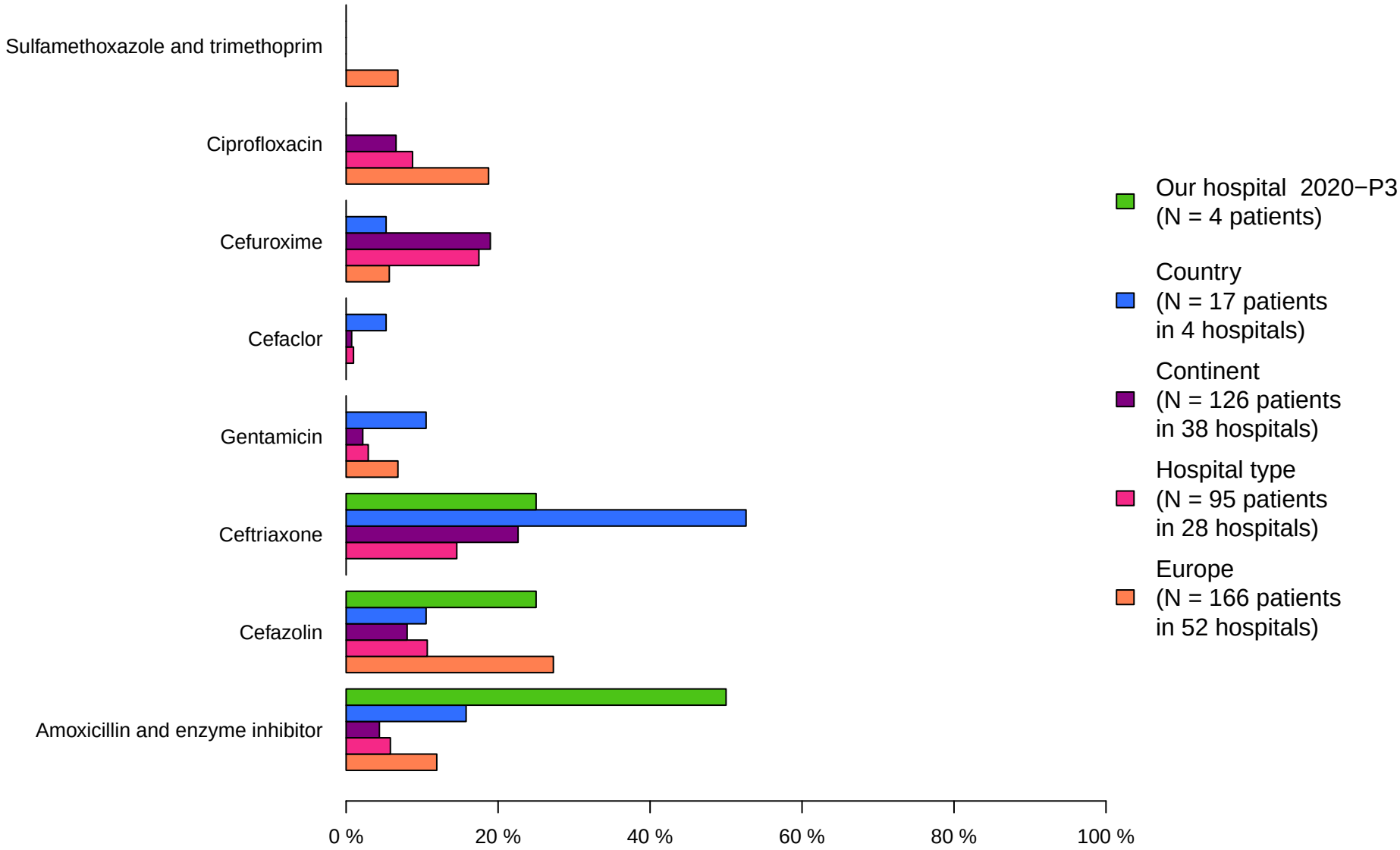
Top 5 most frequently used antimicrobials for medical prophylaxis of the gastro−intestinal tract



Top 5 antimicrobials (ATC5, substance level) prescribed for medical prophylaxis of the gastro−intestinal tract at hospital level, supplemented with the most prescribed antimicrobials at country, continent and hospital type level if they do not fall within top 5 of the hospital.
Selection on diagnostic code = Proph GI and indication = MP; All patients are included with exception of patients admitted on NMW and NICU.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

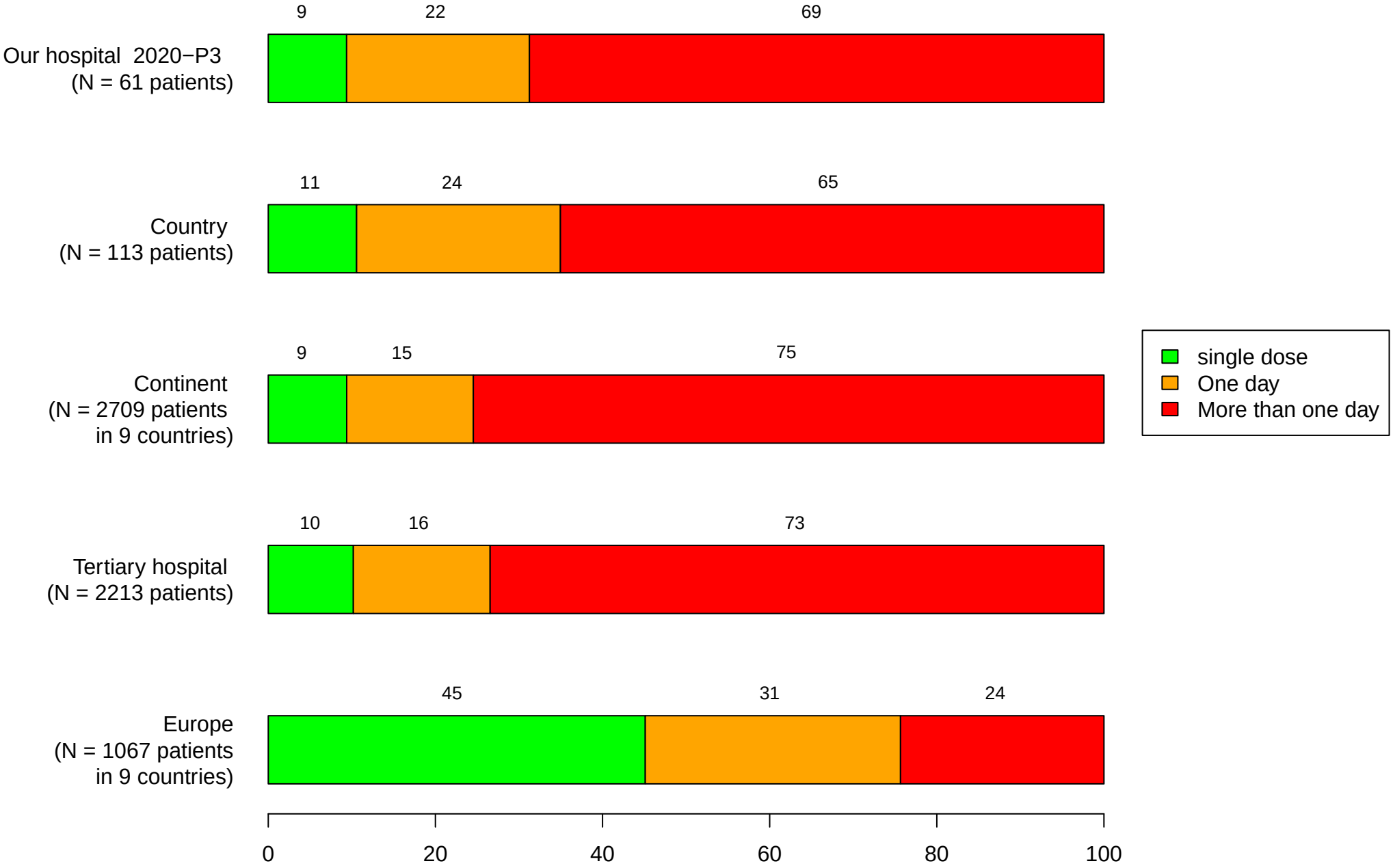
Top 5 most frequently used antibiotics for surgical UTI prophylaxis



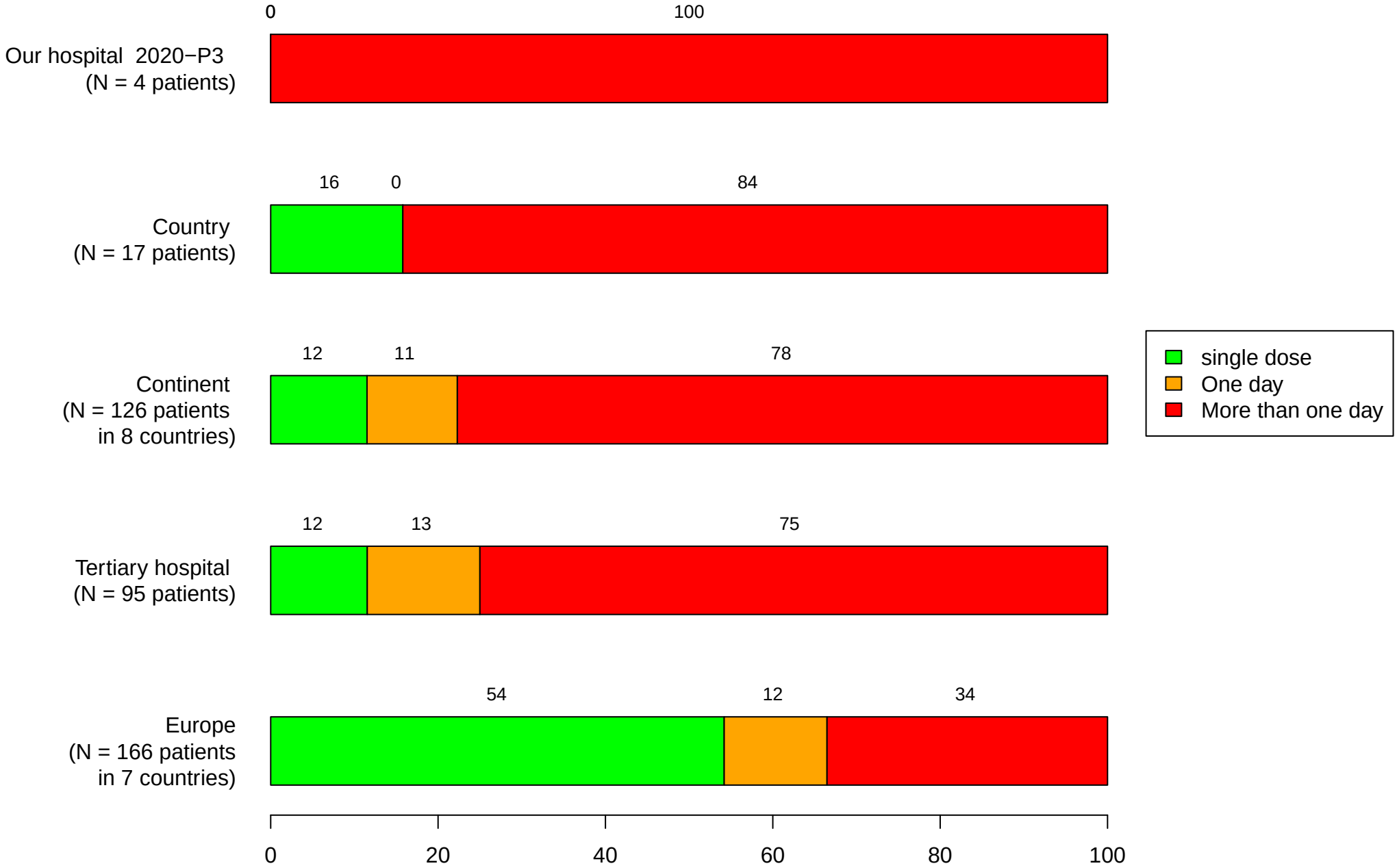
Selection on antibacterials for systemic use (J01). Top 5 antibiotics (ATC5, substance level) prescribed for surgical prophylaxis of the urinary tract at hospital level, supplemented with the most prescribed antibiotics at country, continent and hospital type level if they do not fall within top 5 of the hospital. Selection on diagnostic code = Proph UTI and indication = SP; All patients are included with exception of patients admitted on NMW and NICU.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

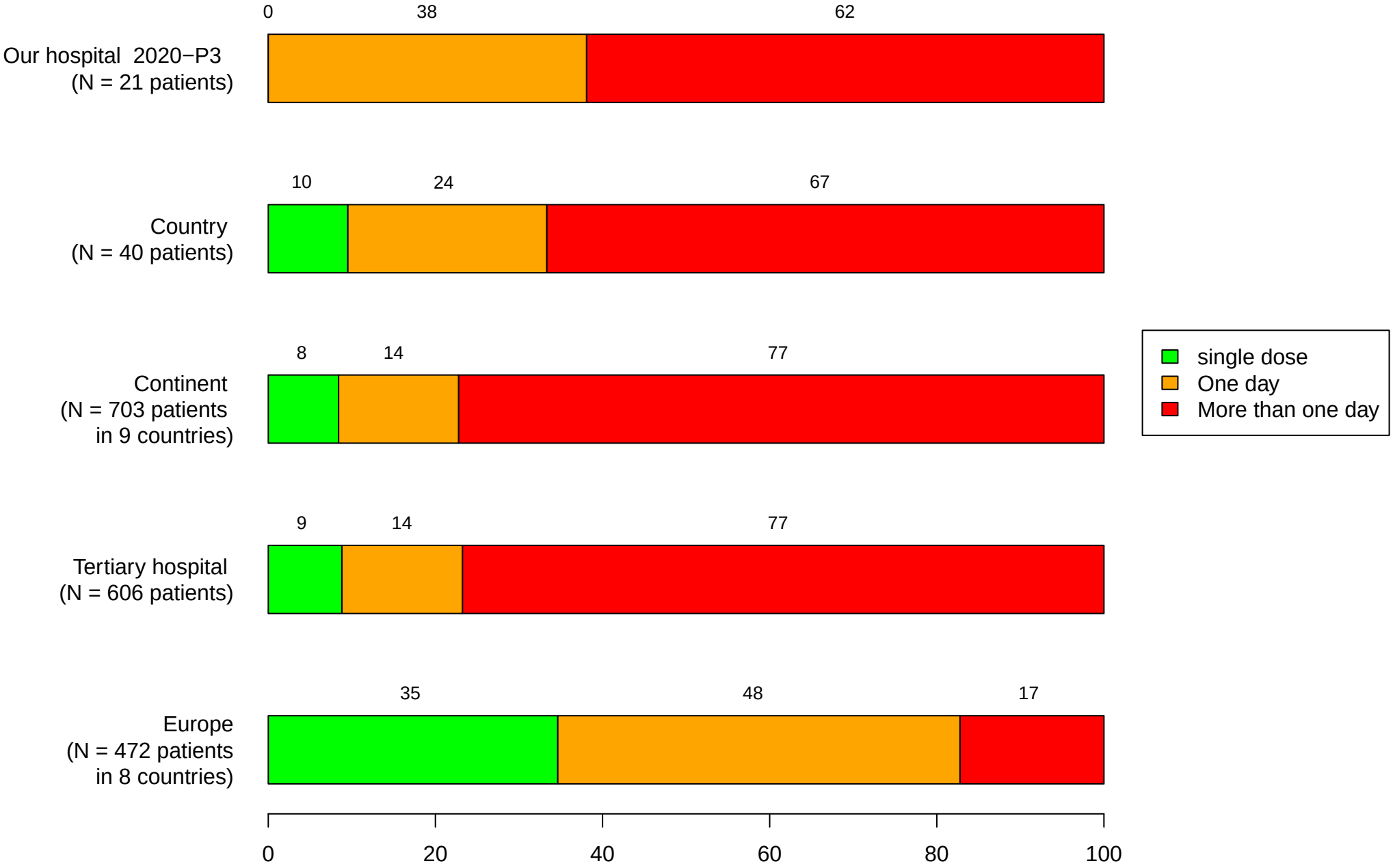
Duration of surgical prophylaxis in adults and children



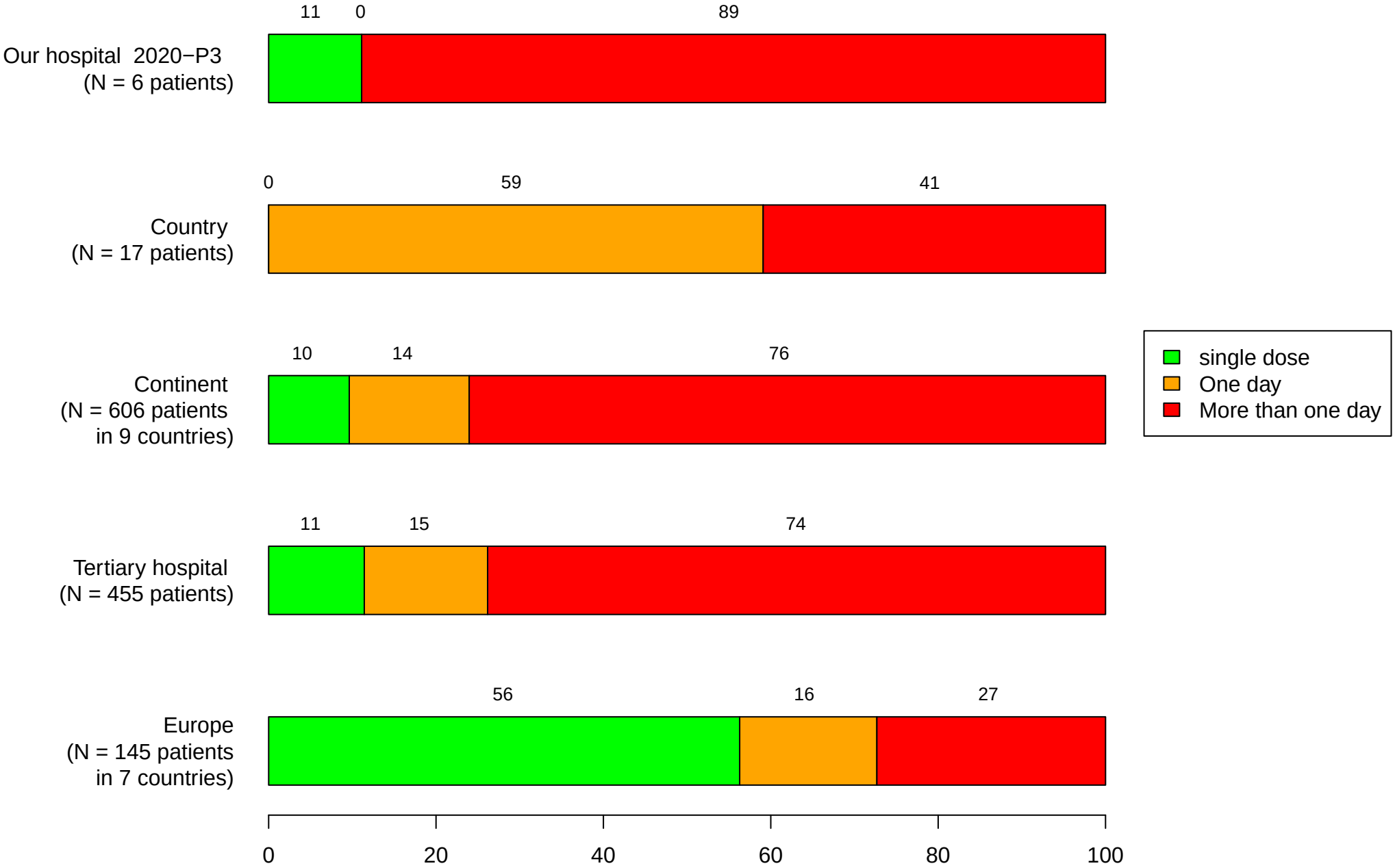
Duration of UTI prophylaxis in adults and children



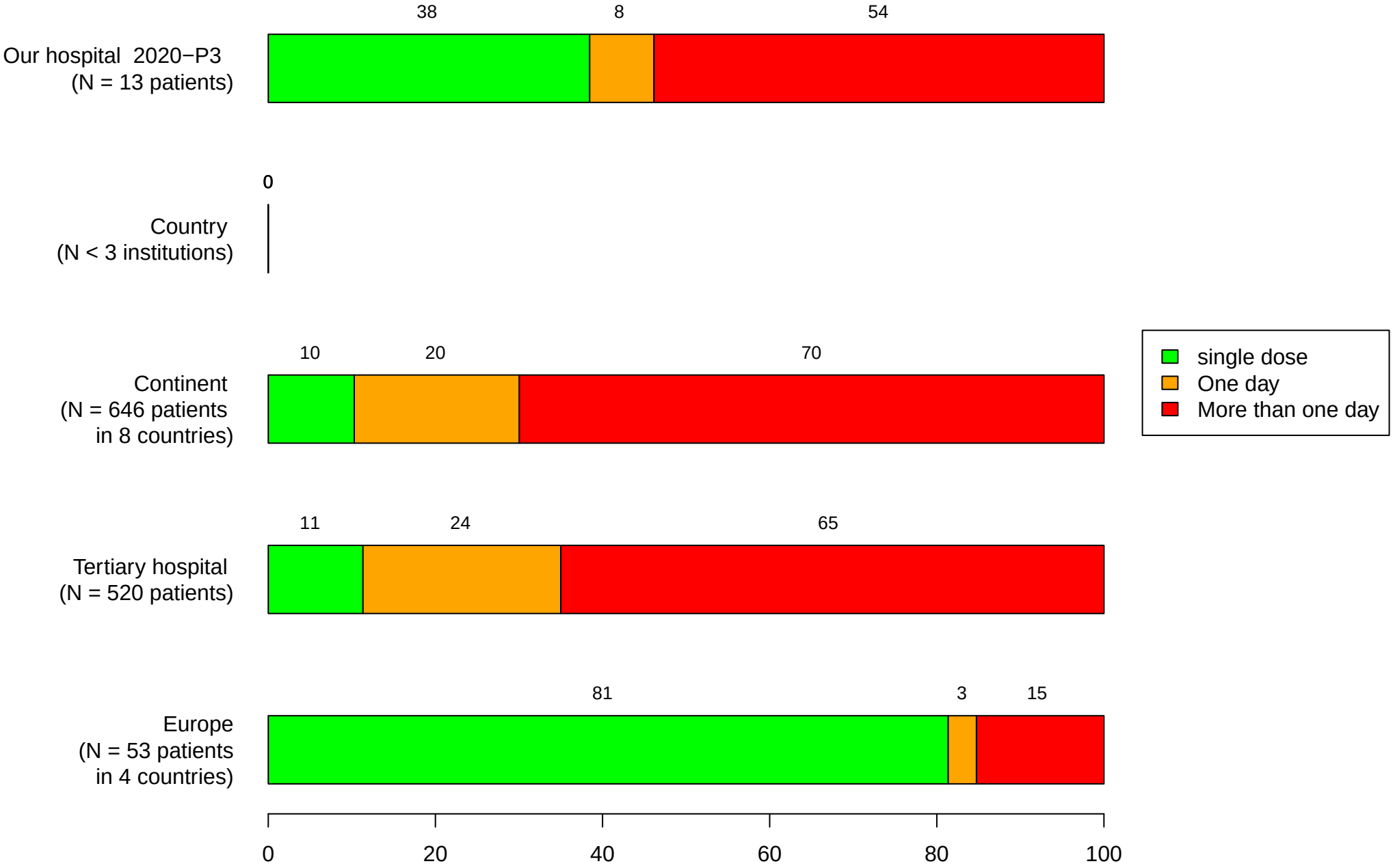
Duration of prophylaxis for plastic and orthopedic surgery in adults and children



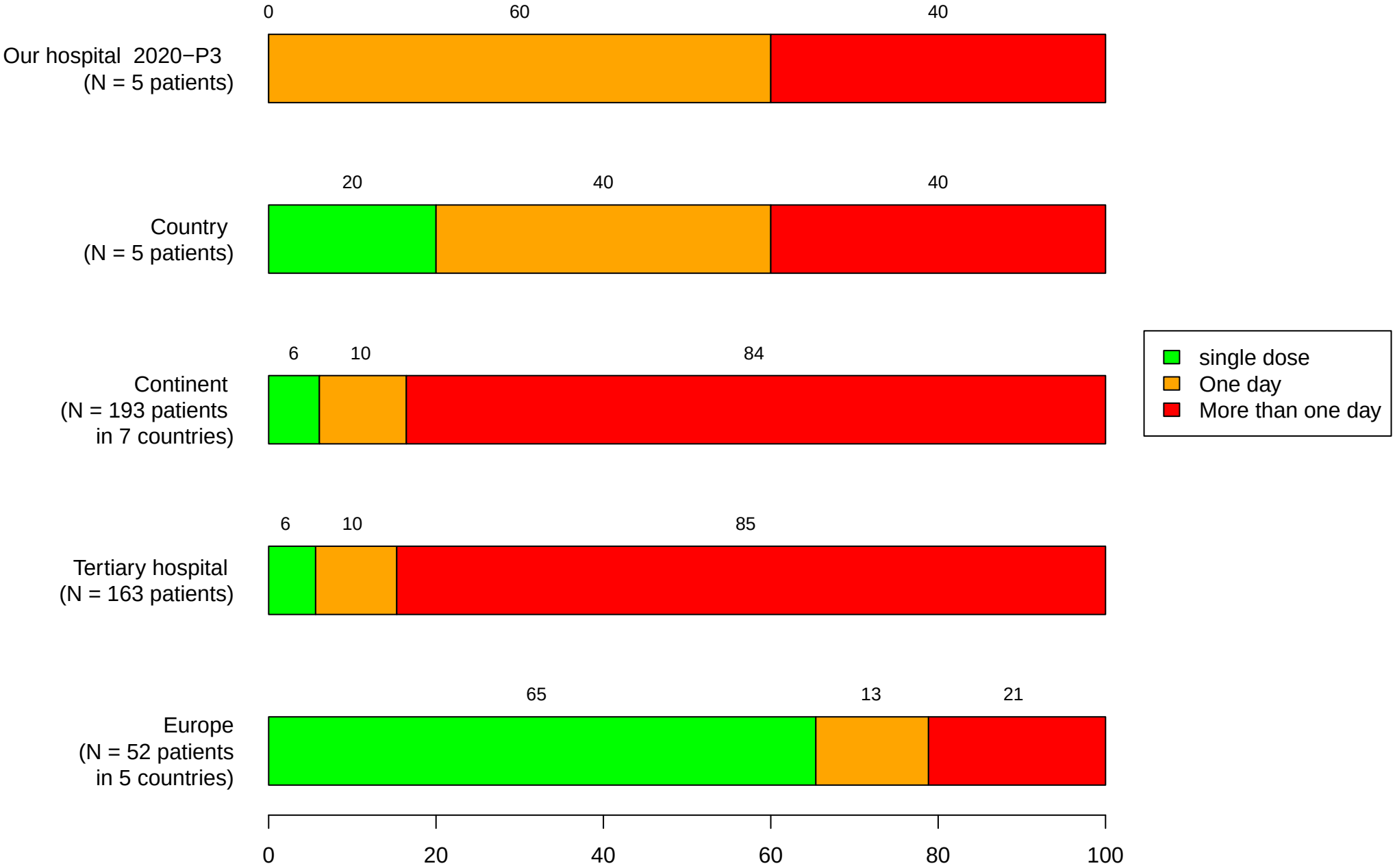
Duration of GI prophylaxis in adults and children



Duration of obstetric or gynaecological prophylaxis in adult wards



Duration of CNS prophylaxis in adults and children



Key prescription patterns (adults and children)

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
All patients										
IV therapy	304	70.4	1160	65.4	9167	78.4	7431	78.2	5298	70.3
Multiple ATB diagnosis	41	8.9	223	12.2	2906	24.0	2441	24.7	954	12.2
Multiple ATB patient	69	16.0	271	15.3	3230	27.6	2715	28.6	1167	15.5
Medical										
IV therapy	167	61.2	730	56.4	5271	68.8	4194	68.3	3056	60.5
Multiple ATB diagnosis	21	7.8	149	11.7	1647	22.9	1353	23.5	555	11.1
Multiple ATB patient	44	18.0	183	14.9	1846	26.6	1517	27.3	688	14.3
Surgical										
IV therapy	104	65.4	335	73.8	2742	73.7	2279	73.8	1584	76.6
Multiple ATB diagnosis	13	8.3	54	12.2	840	23.1	720	23.8	251	12.2
Multiple ATB patient	15	9.7	63	14.5	914	25.8	787	26.8	289	14.3
ICU										
IV therapy	33	91.7	95	82.6	1154	88.5	958	87.9	658	91.3
Multiple ATB diagnosis	7	19.4	20	17.4	419	32.5	368	34.2	148	19.7
Multiple ATB patient	10	30.3	25	23.4	470	38.8	411	40.7	190	27.0

Analyses at patient level. Patients admitted on a NMW and NICU are excluded.
Multiple ATB diagnosis is defined as receiving > 1 antibiotic (J01) for a single identified reason to treat (=diagnose code) at patient level.
Multiple ATB patient is defined as receiving > 1 antibiotic (J01) at patient level.

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Type of antibiotic treatment − Summary

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
All patients										
Empiric	364	73.8	1599	78.0	14285	89.3	11679	89.1	6217	72.1
Targetted	129	26.2	452	22.0	1712	10.7	1430	10.9	2411	27.9
Adults (>= 18 years)										
Empiric	341	73.5	1541	77.4	10709	87.6	8917	87.5	5374	71.0
Targetted	123	26.5	449	22.6	1511	12.4	1273	12.5	2197	29.0
Children (< 18 years)										
Empiric	20	76.9	53	98.1	2939	94.5	2181	94.4	784	80.6
Targetted	6	23.1	1	1.9	170	5.5	129	5.6	189	19.4
Neonates (NICU)										
Empiric	3	100.0	5	71.4	637	95.4	581	95.4	59	70.2
Targetted	0	0.0	2	28.6	31	4.6	28	4.6	25	29.8

Selection on antibiotic treatments.
N = number of antibiotics (J01) included per type of treatment and subgroup (all patients, adults, children and neonates).

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Type of antibiotic treatment by activity

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
All patients										
Empiric	254	66.5	1353	75.1	8936	84.7	7285	84.4	4587	66.3
Targetted	128	33.5	449	24.9	1610	15.3	1349	15.6	2335	33.7
Medical										
Empiric	160	67.8	997	76.9	6404	87.0	5106	86.8	3271	67.4
Targetted	76	32.2	300	23.1	957	13.0	778	13.2	1581	32.6
Surgical										
Empiric	61	57.0	270	70.3	1204	77.5	1028	76.9	817	64.3
Targetted	46	43.0	114	29.7	350	22.5	308	23.1	453	35.7
ICU										
Empiric	33	84.6	86	71.1	1328	81.4	1151	81.4	499	62.4
Targetted	6	15.4	35	28.9	303	18.6	263	18.6	301	37.6

Selection on antibiotic treatments (prophylactic and unknown prescribing are excluded) by activity.
N = number of antibiotics (J01) included per type of treatment and activity (medical, surgical, ICU).

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Treatment based on microbiology data

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
MRSA	6	1.8	11	0.7	77	1.0	64	1.0	66	1.1
MRCoNS	7	2.1	3	0.2	32	0.4	30	0.5	53	0.9
VRE	1	0.3	2	0.1	9	0.1	9	0.1	6	0.1
ESBL	1	0.3	6	0.4	165	2.1	150	2.3	132	2.2
3GCREB	23	7.0	19	1.2	66	0.8	60	0.9	45	0.8
CRE	0	0.0	2	0.1	61	0.8	47	0.7	7	0.1
ESBL−NF	1	0.3	6	0.4	69	0.9	60	0.9	22	0.4
CR−NF	3	0.9	13	0.8	54	0.7	45	0.7	30	0.5
Other MDR	0	0.0	21	1.3	135	1.7	124	1.9	16	0.3
PNSP	0	0.0	0	0.0	0	0.0	0	0.0	3	0.1
MLS	3	0.9	0	0.0	1	0.0	1	0.0	18	0.3
Any of the above	42	12.8	74	4.7	588	7.4	517	8.1	363	6.1

N = the number of patients reported to have recieved a microbiology−based treatment.
% = 100*(the number of patients reported to have recieved a microbiology−based treatment/total number of patients receiving a therapeutic treatment (CAI or HAI) with at least one antibacterial for systemic use (J01)).

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Prevalence (%) of Healthcare Associated Infections: Hospital−wide

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	153	504	1902	1585	2105
Denominator (N admitted patients)	912	4116	24852	19281	27263
HAI rate (%)	16.8	12.2	7.7	8.2	7.7
Post−operative surgical site infection (%)	1.1	1.2	1.0	1.1	1.5
Intervention related infection (%)	3.0	2.2	1.5	1.7	1.3
CDAD (%)	0.5	0.2	0.1	0.1	0.2
Other HAI (%)	10.9	6.4	4.1	4.2	4.0
HAI from another hospital (%)	0.8	0.5	0.5	0.6	0.4
HAI from LTCF or nursing home (%)	1.2	2.1	0.6	0.7	0.7

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Prevalence (%) of Intervention−related versus Other Hospital−Associated Infections Hospital−wide

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	153	504	1902	1585	2105
Denominator (N admitted patients)	912	4116	24852	19281	27263
HAI rate (%)	16.8	12.2	7.7	8.2	7.7
Intervention−related infections (%)					
Mixed origin	0.3	2.1	1.3	1.5	0.5
CVC−BSI	0.9	0.0	0.1	0.0	0.2
PVC−BSI	0.0	0.0	0.0	0.0	0.0
Ventilator−Associated Pneumonia (VAP)	0.4	0.0	0.1	0.1	0.2
CAUTI	1.3	0.1	0.1	0.1	0.3
Other Hospital−Associated Infections (%)					
HAI of mixed or undefined origin	4.8	4.8	3.2	3.4	2.3
Blood Stream Infection (BSI)	1.0	0.1	0.1	0.1	0.2
Hospital−Acquired Pneumonia (not VAP)	4.1	1.2	0.7	0.6	0.9
Urinary Tract Infection (UTI)	1.4	0.2	0.1	0.1	0.6

CVC−BSI = Central Venous Catheter−related Blood Stream Infection
PVC−BSI = Peripheral Vascular Catheter−related Blood Stream Infection
CAUTI = Catheter−Associated Urinary Tract Infection

Intervention−related infections are scored by code HAI2 and Other Hospital−Associated Infections by HAI4 of the variable Indication

Prevalence (%) of Healthcare Associated Infections: Adult wards

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	148	499	1682	1388	2001
Denominator (N admitted patients)	809	3972	20774	16315	24366
HAI rate (%)	18.3	12.6	8.1	8.5	8.2
Post−operative surgical site infection (%)	1.2	1.3	1.1	1.2	1.6
Intervention related infection (%)	3.2	2.3	1.5	1.7	1.3
CDAD (%)	0.6	0.2	0.1	0.1	0.2
Other HAI (%)	11.6	6.5	4.3	4.3	4.2
HAI from another hospital (%)	0.9	0.5	0.5	0.6	0.4
HAI from LTCF or nursing home (%)	1.4	2.1	0.7	0.8	0.8

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Prevalence (%) of Intervention−related versus Other Hospital−Associated Infections Adult Wards

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	148	499	1682	1388	2001
Denominator (N admitted patients)	809	3972	20774	16315	24366
HAI rate (%)	18.3	12.6	8.1	8.5	8.2
Intervention−related infections (%)					
Mixed origin	0.4	2.1	1.3	1.5	0.5
CVC−BSI	0.9	0.1	0.0	0.0	0.1
PVC−BSI	0.0	0.0	0.0	0.0	0.0
Ventilator−Associated Pneumonia (VAP)	0.5	0.0	0.1	0.1	0.2
CAUTI	1.5	0.1	0.1	0.1	0.4
Other Hospital−Associated Infections (%)					
HAI of mixed or undefined origin	4.9	4.9	3.3	3.5	2.4
Blood Stream Infection (BSI)	1.1	0.1	0.1	0.1	0.2
Hospital−Acquired Pneumonia (not VAP)	4.4	1.3	0.8	0.7	1.0
Urinary Tract Infection (UTI)	1.6	0.3	0.1	0.1	0.6

CVC−BSI = Central Venous Catheter−related Blood Stream Infection
PVC−BSI = Peripheral Vascular Catheter−related Blood Stream Infection
CAUTI = Catheter−Associated Urinary Tract Infection

Intervention−related infections are scored by code HAI2 and Other Hospital−Associated Infections by HAI4 of the variable Indication

Prevalence (%) of Healthcare Associated Infections: Child and Neonatal Wards

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	5		220	197	104
Denominator (N admitted patients)	103		4078	2966	2897
HAI rate (%)	4.9		5.4	6.6	3.6
Post−operative surgical site infection (%)	0.0		0.3	0.3	0.4
Intervention related infection (%)	1.0		1.4	1.8	1.1
CDAD (%)	0.0		0.0	0.1	0.0
Other HAI (%)	4.9		3.1	3.8	1.9
HAI from another hospital (%)	0.0		0.5	0.7	0.2
HAI from LTCF or nursing home (%)	0.0		0.1	0.2	0.0

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Prevalence (%) of Intervention−related versus Other Hospital−Associated Infections Child and Neonatal Wards

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	5		220	197	104
Denominator (N admitted patients)	103		4078	2966	2897
HAI rate (%)	4.9		5.4	6.6	3.6
Intervention−related infections (%)					
Mixed origin	0.0		1.1	1.4	0.5
CVC−BSI	1.0		0.1	0.1	0.4
PVC−BSI	0.0		0.0	0.0	0.0
Ventilator−Associated Pneumonia (VAP)	0.0		0.2	0.3	0.1
CAUTI	0.0		0.0	0.0	0.1
Other Hospital−Associated Infections (%)					
HAI of mixed or undefined origin	3.9		2.8	3.4	1.6
Blood Stream Infection (BSI)	0.0		0.1	0.2	0.3
Hospital−Acquired Pneumonia (not VAP)	1.0		0.2	0.3	0.0
Urinary Tract Infection (UTI)	0.0		0.0	0.0	0.0

CVC−BSI = Central Venous Catheter−related Blood Stream Infection
PVC−BSI = Peripheral Vascular Catheter−related Blood Stream Infection
CAUTI = Catheter−Associated Urinary Tract Infection

Intervention−related infections are scored by code HAI2 and Other Hospital−Associated Infections by HAI4 of the variable Indication

Prevalence (%) of Healthcare Associated Infections: Adult – ICU

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	14	40	266	228	309
Denominator (N admitted patients)	59	157	1620	1302	1198
HAI rate (%)	23.7	25.5	16.4	17.5	25.8
Post−operative surgical site infection (%)	0.0	1.3	1.7	1.9	3.7
Intervention related infection (%)	6.8	7.0	5.4	5.8	8.3
CDAD (%)	1.7	0.6	0.4	0.5	0.1
Other HAI (%)	18.6	16.6	8.0	8.2	11.9
HAI from another hospital (%)	0.0	1.3	1.4	1.5	1.8
HAI from LTCF or nursing home (%)	0.0	0.0	0.2	0.2	0.8

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Prevalence (%) of Intervention−related versus Other Hospital−Associated Infections
Adult − ICU

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	14	40	266	228	309
Denominator (N admitted patients)	59	157	1620	1302	1198
HAI rate (%)	23.7	25.5	16.4	17.5	25.8
Intervention−related infections (%)					
Mixed origin	0.0	7.0	4.3	4.6	3.0
CVC−BSI	1.7	0.0	0.1	0.2	0.5
PVC−BSI	0.0	0.0	0.0	0.0	0.1
Ventilator−Associated Pneumonia (VAP)	5.1	0.0	0.8	1.0	4.2
CAUTI	0.0	0.0	0.2	0.1	0.8
Other Hospital−Associated Infections (%)					
HAI of mixed or undefined origin	10.2	15.9	5.9	6.1	6.8
Blood Stream Infection (BSI)	1.7	0.0	0.7	0.9	0.5
Hospital−Acquired Pneumonia (not VAP)	8.5	0.6	1.6	1.5	4.4
Urinary Tract Infection (UTI)	0.0	0.0	0.1	0.2	0.3

CVC−BSI = Central Venous Catheter−related Blood Stream Infection
PVC−BSI = Peripheral Vascular Catheter−related Blood Stream Infection
CAUTI = Catheter−Associated Urinary Tract Infection

Intervention−related infections are scored by code HAI2 and Other Hospital−Associated Infections by HAI4 of the variable Indication

Prevalence (%) of Healthcare Associated Infections: Adult Medical Wards

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	116	364	1045	824	1221
Denominator (N admitted patients)	604	2927	13838	10395	16484
HAI rate (%)	19.2	12.4	7.6	7.9	7.4
Post−operative surgical site infection (%)	1.2	0.8	0.4	0.5	0.6
Intervention related infection (%)	3.1	2.4	1.2	1.3	0.9
CDAD (%)	0.7	0.3	0.1	0.1	0.2
Other HAI (%)	11.9	6.3	4.6	4.6	4.5
HAI from another hospital (%)	1.2	0.4	0.5	0.5	0.3
HAI from LTCF or nursing home (%)	1.7	2.7	1.0	1.1	1.0

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Prevalence (%) of Intervention−related versus Other Hospital−Associated Infections
Adult Medical Wards

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	116	364	1045	824	1221
Denominator (N admitted patients)	604	2927	13838	10395	16484
HAI rate (%)	19.2	12.4	7.6	7.9	7.4
Intervention−related infections (%)					
Mixed origin	0.5	2.2	1.0	1.2	0.4
CVC−BSI	0.8	0.0	0.0	0.0	0.2
PVC−BSI	0.0	0.0	0.0	0.0	0.0
Ventilator−Associated Pneumonia (VAP)	0.2	0.0	0.0	0.0	0.0
CAUTI	1.7	0.1	0.1	0.1	0.4
Other Hospital−Associated Infections (%)					
HAI of mixed or undefined origin	4.8	4.4	3.6	3.7	2.5
Blood Stream Infection (BSI)	1.2	0.1	0.1	0.1	0.2
Hospital−Acquired Pneumonia (not VAP)	4.6	1.5	0.8	0.7	1.0
Urinary Tract Infection (UTI)	1.8	0.3	0.1	0.1	0.8

CVC−BSI = Central Venous Catheter−related Blood Stream Infection
PVC−BSI = Peripheral Vascular Catheter−related Blood Stream Infection
CAUTI = Catheter−Associated Urinary Tract Infection

Intervention−related infections are scored by code HAI2 and Other Hospital−Associated Infections by HAI4 of the variable Indication

Prevalence (%) of Healthcare Associated Infections: Adult Surgical Ward

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	18	95	371	336	471
Denominator (N admitted patients)	146	888	5316	4618	6684
HAI rate (%)	12.3	10.7	7.0	7.3	7.0
Post−operative surgical site infection (%)	2.1	2.9	2.7	2.7	3.5
Intervention related infection (%)	2.1	1.1	1.2	1.4	1.0
CDAD (%)	0.0	0.0	0.1	0.1	0.1
Other HAI (%)	7.5	5.7	2.5	2.6	2.2
HAI from another hospital (%)	0.0	0.6	0.3	0.3	0.3
HAI from LTCF or nursing home (%)	0.7	0.6	0.2	0.2	0.2

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Prevalence (%) of Intervention−related versus Other Hospital−Associated Infections
Adult Surgical Ward

	Hospital 2020−P3	Country	Continent	Hospital type	Europe
Numerator (N patients)	18	95	371	336	471
Denominator (N admitted patients)	146	888	5316	4618	6684
HAI rate (%)	12.3	10.7	7.0	7.3	7.0
Intervention−related infections (%)					
Mixed origin	0.0	0.9	1.1	1.3	0.5
CVC−BSI	0.7	0.1	0.0	0.0	0.1
PVC−BSI	0.0	0.0	0.0	0.0	0.1
Ventilator−Associated Pneumonia (VAP)	0.0	0.0	0.0	0.0	0.0
CAUTI	1.4	0.1	0.0	0.0	0.3
Other Hospital−Associated Infections (%)					
HAI of mixed or undefined origin	3.4	4.8	2.0	2.1	1.4
Blood Stream Infection (BSI)	0.7	0.1	0.1	0.0	0.1
Hospital−Acquired Pneumonia (not VAP)	2.1	0.7	0.4	0.4	0.4
Urinary Tract Infection (UTI)	1.4	0.2	0.1	0.1	0.3

CVC−BSI = Central Venous Catheter−related Blood Stream Infection
PVC−BSI = Peripheral Vascular Catheter−related Blood Stream Infection
CAUTI = Catheter−Associated Urinary Tract Infection

Intervention−related infections are scored by code HAI2 and Other Hospital−Associated Infections by HAI4 of the variable Indication

Invasive device use hospital−wide

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
N total admitted patients	912				1576		1479		12237	
N admitted patients with:										
PVC	483	53.0			1135	72.0	1038	70.2	4493	36.7
CVC	121	13.3			82	5.2	82	5.5	804	6.6
Indwelling UC	116	12.7			215	13.6	215	14.5	1480	12.1
Tubes/Drains	83	9.1			174	11.0	174	11.8	775	6.3
IRI	41	4.5			62	3.9	62	4.2	187	1.5
CiPAP−BiPAP	0	0.0			3	0.2	3	0.2	16	0.1

CVC = Central Venous Catheter; PVC = Peripheral Vascular Catheter;
UC = Urinary Catheter; IRI = Invasive endotracheal Respiratory Intubation;
CiPAP, BiPAP = Non−invasive mechanical ventilation

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Invasive device use − Adult wards

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
N total admitted patients	809				1376		1295		11373	
N admitted patients with:										
PVC	450	55.6			1030	74.9	949	73.3	4201	36.9
CVC	106	13.1			78	5.7	78	6.0	785	6.9
Indwelling UC	112	13.8			205	14.9	205	15.8	1473	13.0
Tubes/Drains	79	9.8			164	11.9	164	12.7	723	6.4
IRI	37	4.6			56	4.1	56	4.3	178	1.6
CiPAP−BiPAP	0	0.0			3	0.2	3	0.2	16	0.1

CVC = Central Venous Catheter; PVC = Peripheral Vascular Catheter;
UC = Urinary Catheter; IRI = Invasive endotracheal Respiratory Intubation;
CiPAP, BiPAP = Non−invasive mechanical ventilation

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Invasive device use − Adult ICU

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
N total admitted patients	59				139		133		484	
N admitted patients with:										
PVC	40	67.8			124	89.2	118	88.7	287	59.3
CVC	30	50.8			36	25.9	36	27.1	281	58.1
Indwelling UC	25	42.4			79	56.8	79	59.4	349	72.1
Tubes/Drains	7	11.9			43	30.9	43	32.3	139	28.7
IRI	22	37.3			32	23.0	32	24.1	124	25.6
CiPAP−BiPAP	0	0.0			3	2.2	3	2.3	4	0.8

CVC = Central Venous Catheter; PVC = Peripheral Vascular Catheter;
UC = Urinary Catheter; IRI = Invasive endotracheal Respiratory Intubation;
CiPAP, BiPAP = Non−invasive mechanical ventilation

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

Invasive device use − Adult medical wards

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
N total admitted patients	604				858		818		8237	
N admitted patients with:										
PVC	312	51.7			594	69.2	554	67.7	2697	32.7
CVC	67	11.1			41	4.8	41	5.0	355	4.3
Indwelling UC	57	9.4			77	9.0	77	9.4	744	9.0
Tubes/Drains	40	6.6			97	11.3	97	11.9	177	2.1
IRI	6	1.0			23	2.7	23	2.8	27	0.3
CiPAP−BiPAP	0	0.0			0	0.0	0	0.0	12	0.1

CVC = Central Venous Catheter; PVC = Peripheral Vascular Catheter;
UC = Urinary Catheter; IRI = Invasive endotracheal Respiratory Intubation;
CiPAP, BiPAP = Non−invasive mechanical ventilation

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

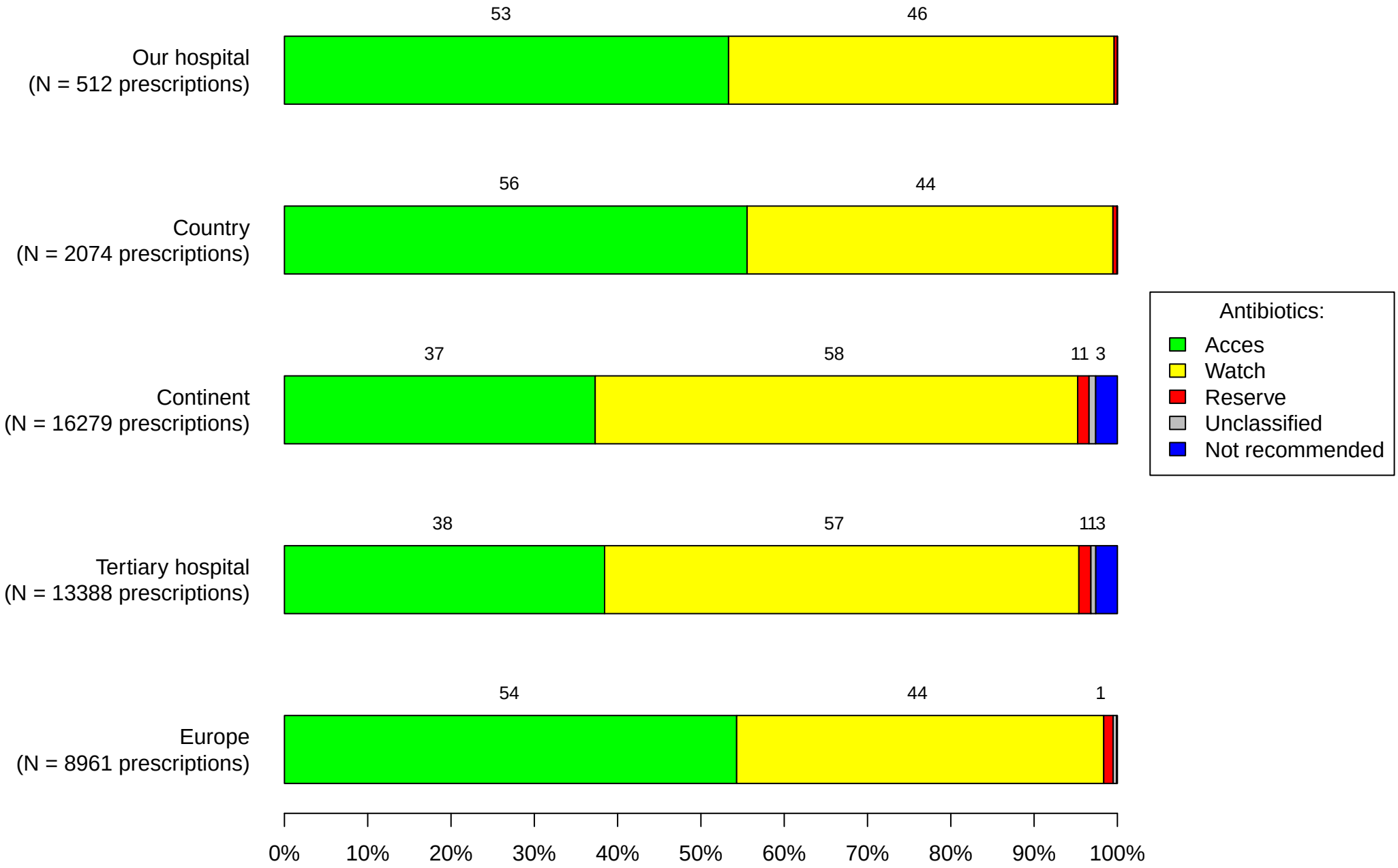
Invasive device use − Adult surgical ward

	Our hospital 2020−P3		Country		Continent		Hospital type		Europe	
	N	%	N	%	N	%	N	%	N	%
N total admitted patients	146				379		344		2652	
N admitted patients with:										
PVC	98	67.1			312	82.3	277	80.5	1217	45.9
CVC	9	6.2			1	0.3	1	0.3	149	5.6
Indwelling UC	30	20.5			49	12.9	49	14.2	380	14.3
Tubes/Drains	32	21.9			24	6.3	24	7.0	407	15.3
IRI	9	6.2			1	0.3	1	0.3	27	1.0
CiPAP−BiPAP	0	0.0			0	0.0	0	0.0	0	0.0

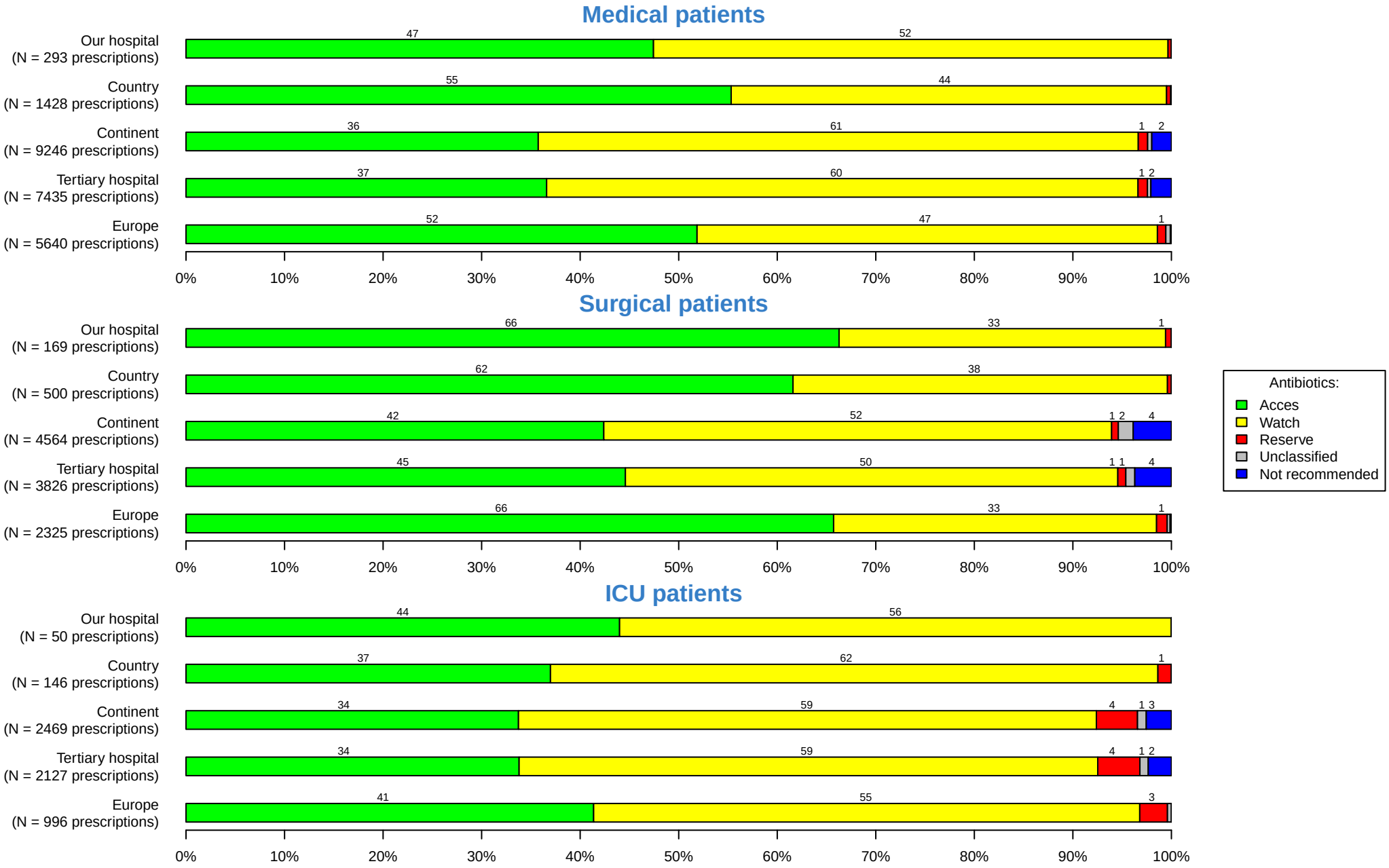
CVC = Central Venous Catheter; PVC = Peripheral Vascular Catheter;
UC = Urinary Catheter; IRI = Invasive endotracheal Respiratory Intubation;
CiPAP, BiPAP = Non−invasive mechanical ventilation

Country: Country ; Continent: Continent ; Hospital type: Tertiary hospital

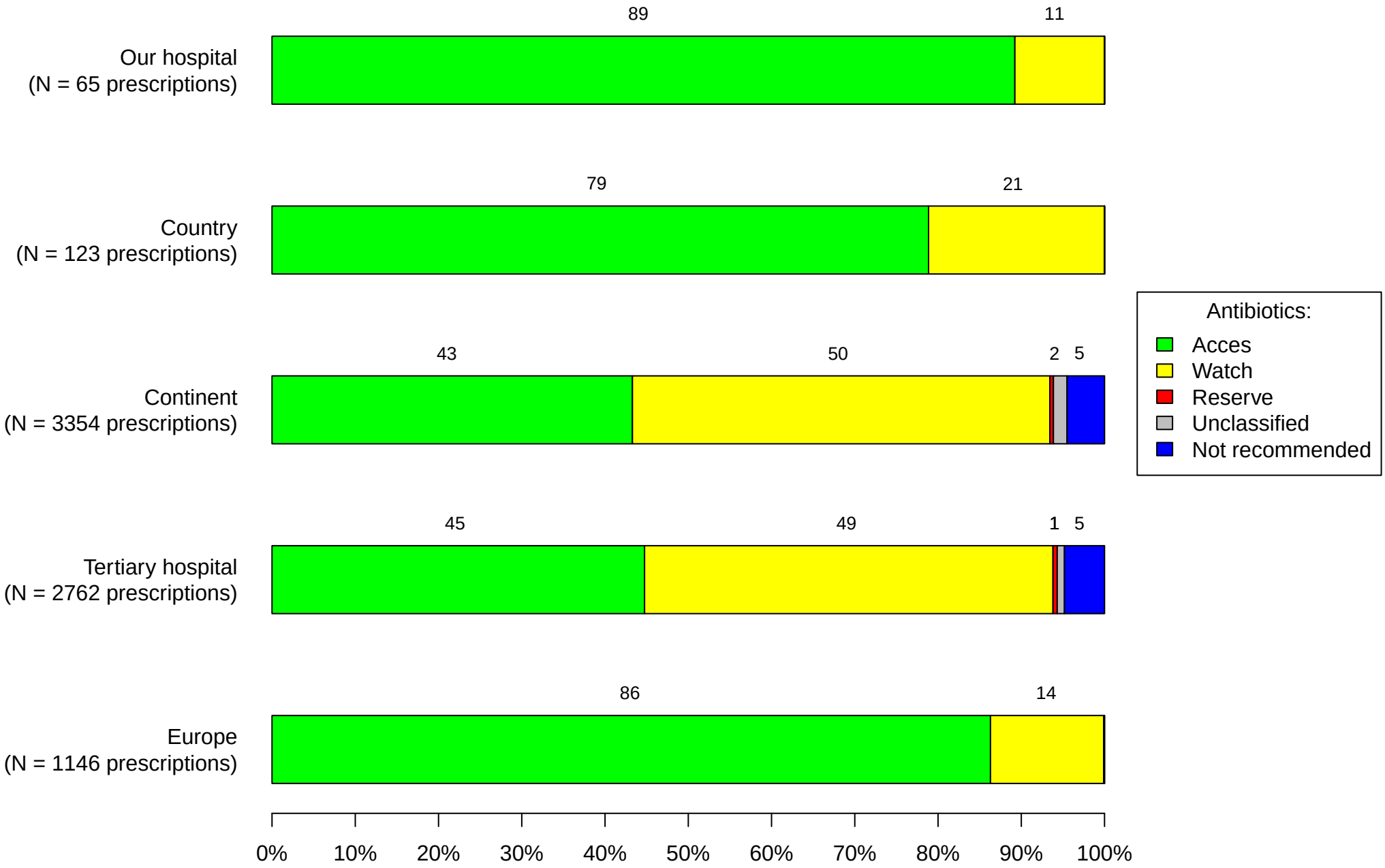
Overall antibiotic use (ATC J01) according to the WHO AWaRe classification



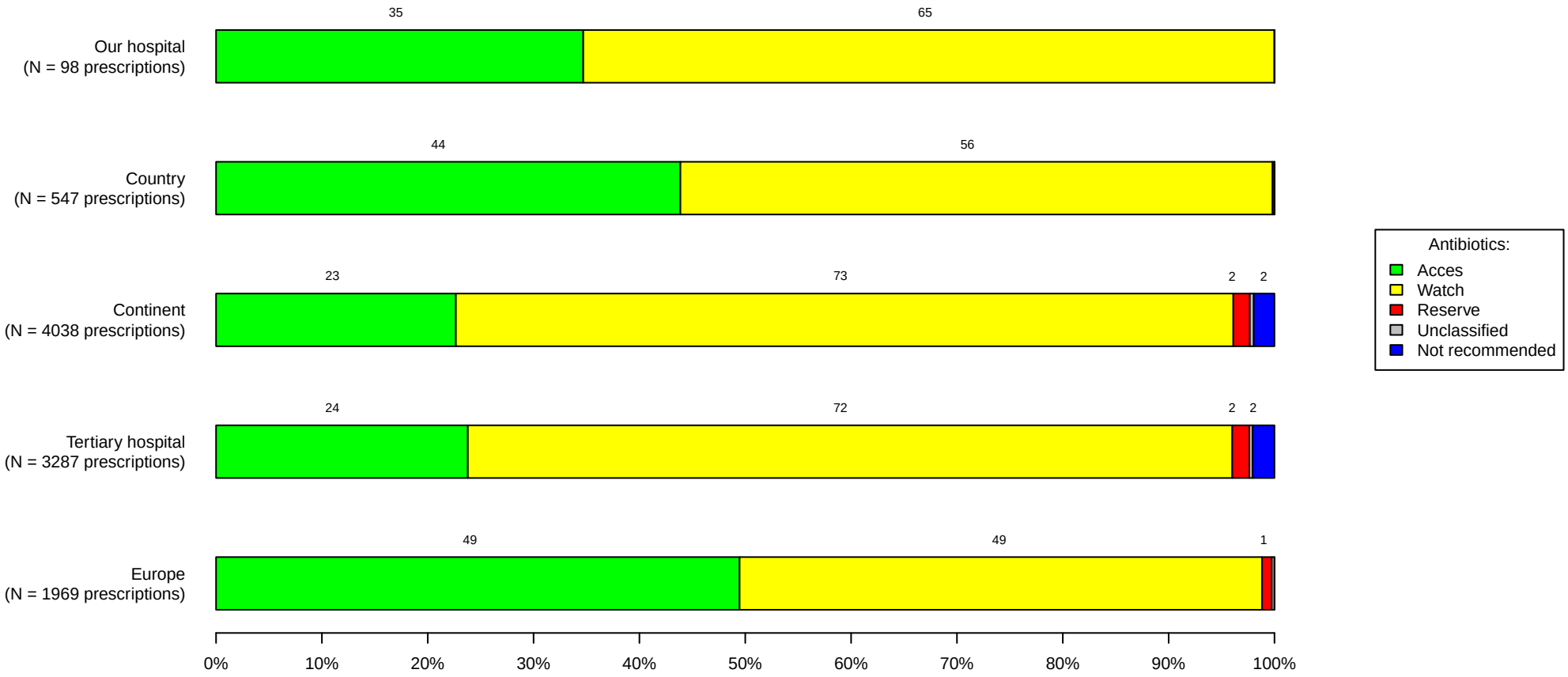
Antibiotic use (ATC J01) by activity according to the WHO AWaRe classification



Overall antibiotic use (ATC J01) according to the WHO AWaRe classification − Patients receiving surgical prophylaxis

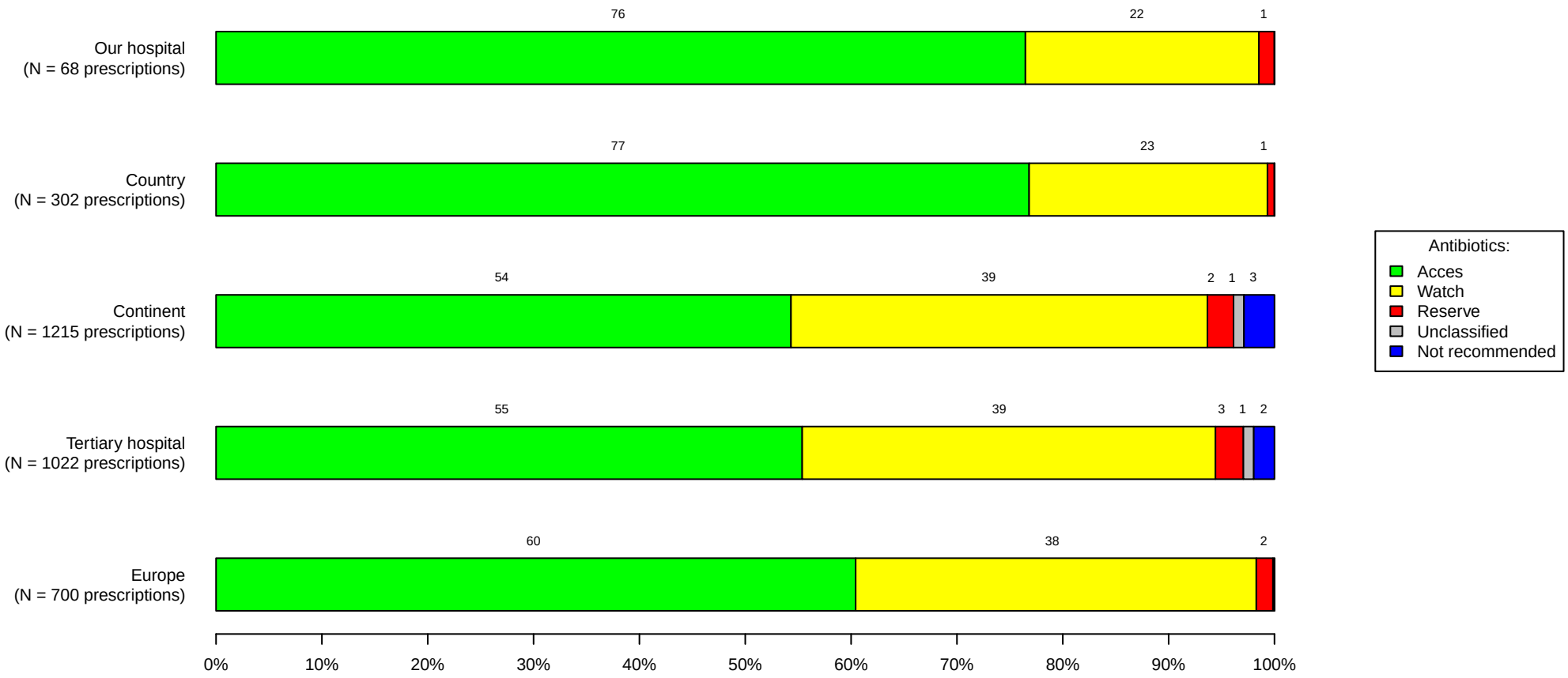


Overall antibiotic use (ATC J01) according to the WHO AWaRe classification – pneumonia



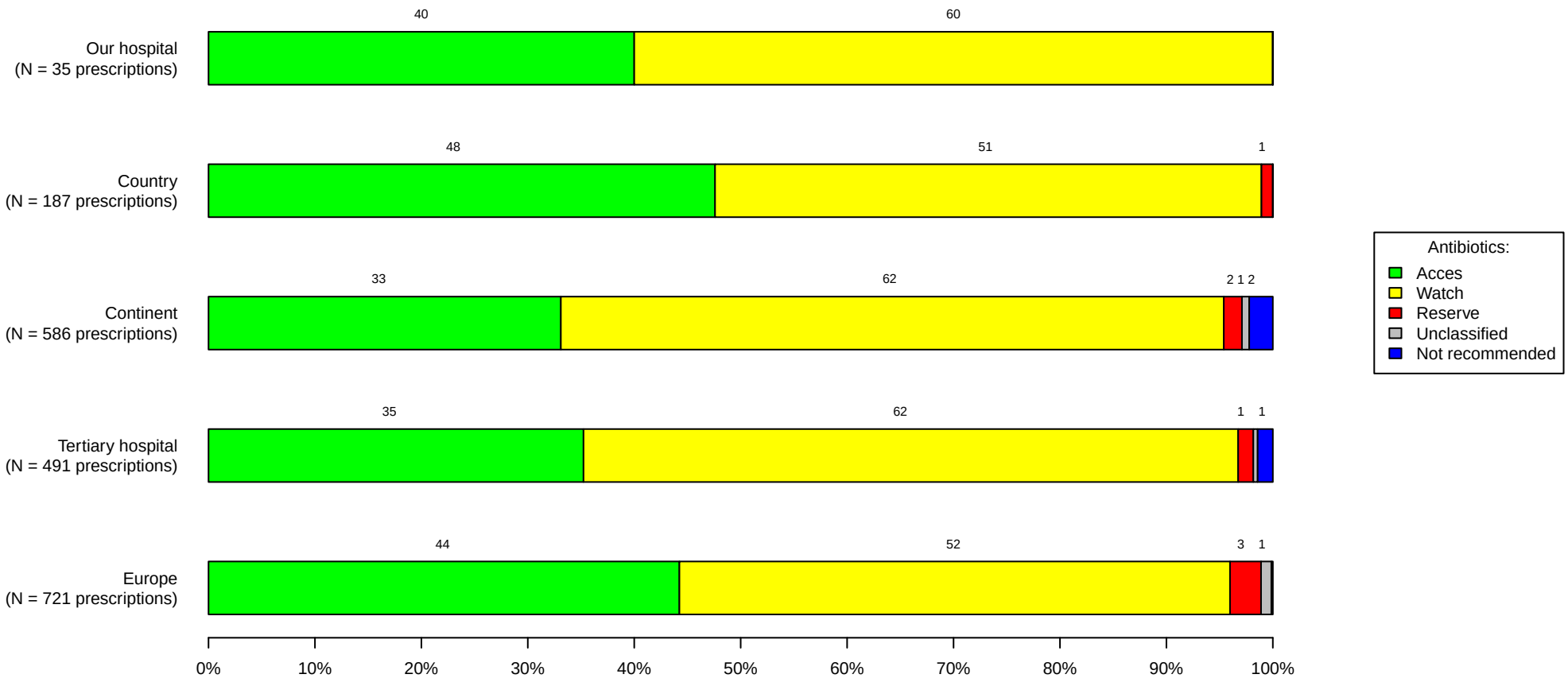
Prophylactic prescribing and patients admitted on NICU or NMW are excluded from this analysis

Overall antibiotic use (ATC J01) according to the WHO AWaRe classification – skin and soft tissue infections



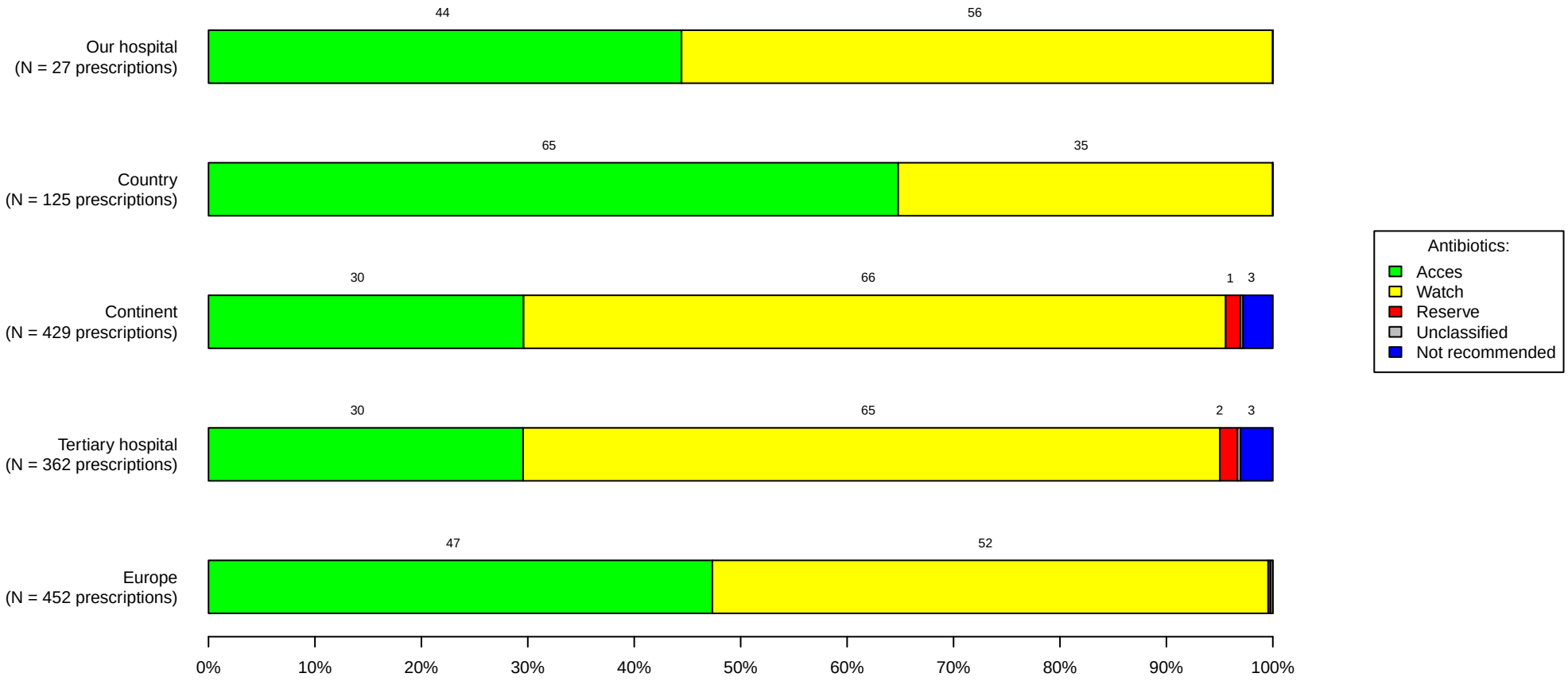
Prophylactic prescribing and patients admitted on NICU or NMW are excluded from this analysis

Overall antibiotic use (ATC J01) according to the WHO AWaRe classification − intra−abdominal sepsis



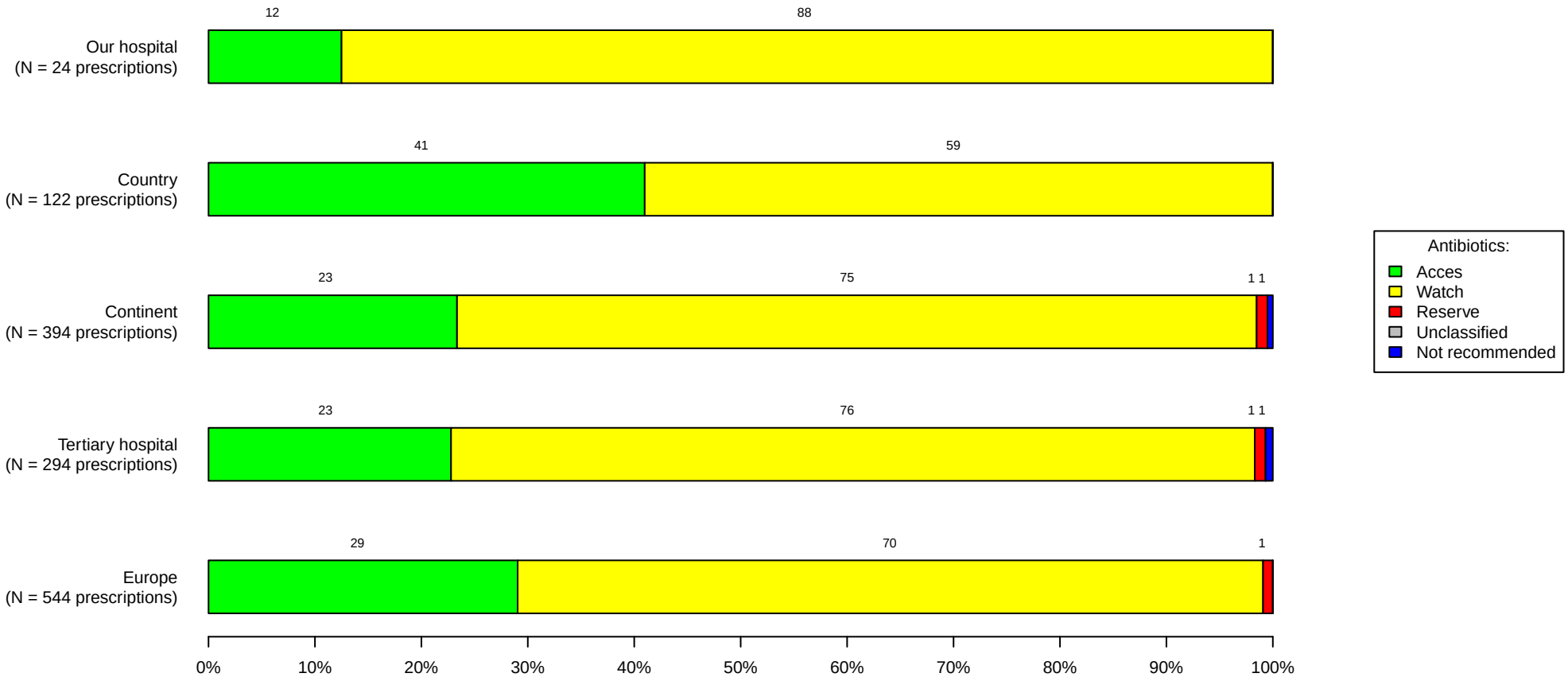
Prophylactic prescribing and patients admitted on NICU or NMW are excluded from this analysis

Overall antibiotic use (ATC J01) according to the WHO AWaRe classification – lower urinary tract infections



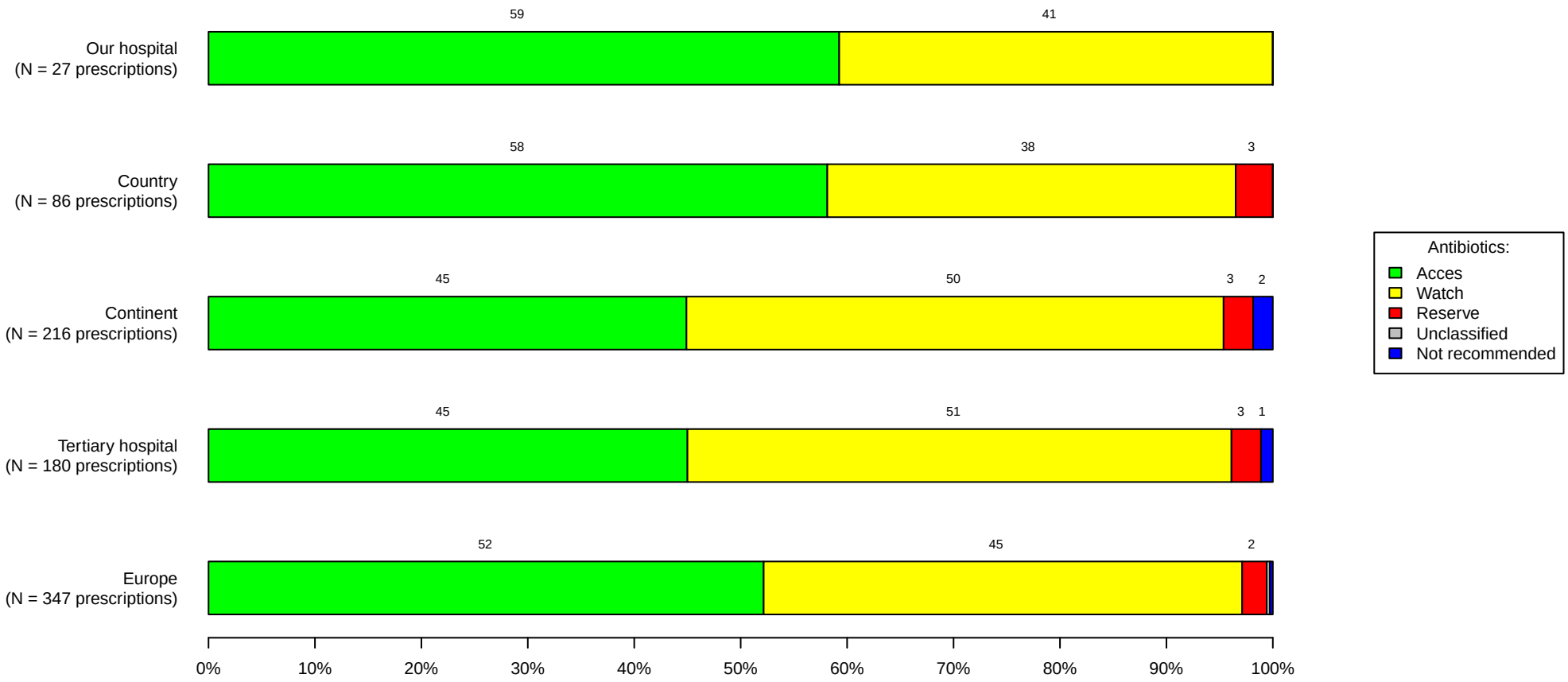
Prophylactic prescribing and patients admitted on NICU or NMW are excluded from this analysis

Overall antibiotic use (ATC J01) according to the WHO AWaRe classification – upper urinary tract infections



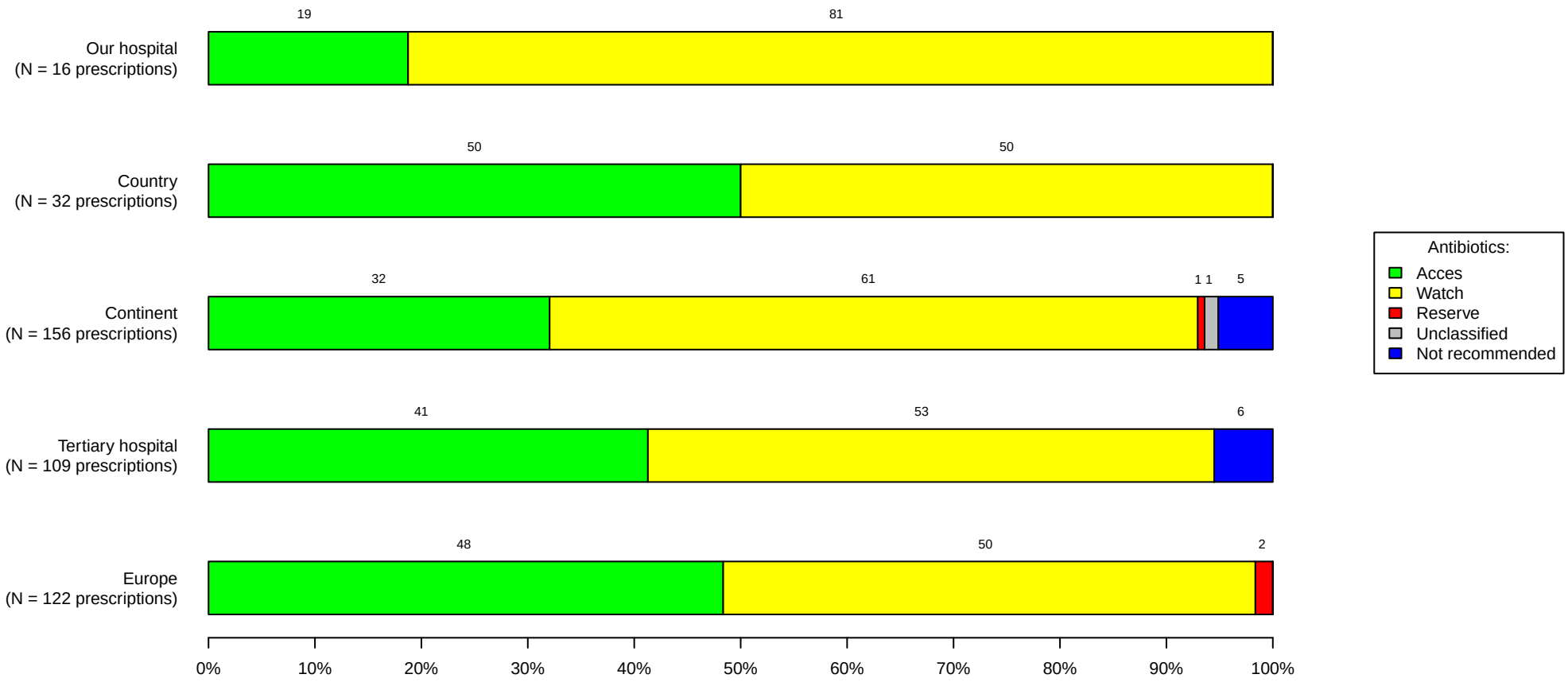
Prophylactic prescribing and patients admitted on NICU or NMW are excluded from this analysis

Overall antibiotic use (ATC J01) according to the WHO AWaRe classification – bone and joint infections



Prophylactic prescribing and patients admitted on NICU or NMW are excluded from this analysis

Overall antibiotic use (ATC J01) according to the WHO AWaRe classification – PUO



Prophylactic prescribing and patients admitted on NICU or NMW are excluded from this analysis

Overall antibiotic use (ATC J01) according to the WHO AWaRe classification

Access Our Hospital	Access Country	Watch Our Hospital	Watch Country	Reserve Our Hospital	Reserve Country
AMC 22.9%	AMC 32%	TZP 12.7%	TZP 12.8%	Linezolid 0.2%	Polymyxin b 0.2%
SXT 8.4%	Cefazolin 7.2%	Ceftriaxone 9.2%	Ceftriaxone 7%	Tedizolid 0.2%	Aztreonam 0.1%
Cefazolin 8.2%	SXT 4.1%	Meropenem 8.4%	Meropenem 5.8%		Daptomycin 0.1%
Clindamycin 2.7%	Metronidazole P 2.6%	Ciprofloxacin 3.9%	Ciprofloxacin 5.2%		
Metronidazole P 2.3%	Doxycycline 1.9%	Vancomycin P 3.7%	Vancomycin P 2.8%		

Top 5 antibiotics by AWaRe classification and percentage of all prescriptions. Only antibacterials for systemic use (ATC J01) are included.

P=Parenteral, O=Oral, I=Inhalation, R=Rectal.

TZP=Piperacillin and enzyme inhibitor, AMC=Amoxicillin and enzyme inhibitor, SXT=Sulfamethoxazole and trimethoprim, SAM=Ampicillin and enzyme inhibitor, I−R=Imipenem and enzyme inhibitor, Cefo−Sul=Cefoperazone and beta−lactamase inhibitor, TMP/SDZ=Sulfadiazine and trimethoprim, Pen−G=Benzathine benzylpenicillin, AMP−Com=Ampicillin, combinations, Pen−Com=Penicillins, combinations with other antibacterials, Chl=Chloramphenicol, Pen V=Phenoxymethylpenicillin, Ceftr−com=Ceftriaxone, combinations, Ceftr−BLI=Ceftriaxone and beta−lactamase inhibitor, Cefu−Com=Cefuroxime, combinations with other antibacterials, Sulfam−TMP=Sulfamoxole and trimethoprim, Sulfad−TMP=Sulfadimidine and trimethoprim, Ben−Pen−V=Benzathine phenoxymethylpenicillin, CIP−Met=Ciprofloxacin and metronidazol CZA=ceftazidime and beta−lactamase inhibitor, TIM=Ticarcillin and enzyme inhibitor, Pani−Bet=Panipenem and betamipron.