XIX Congreso de Calidad Asistencial del Principado de Asturias
Hospital Valle del Nalón Langreo
7 y 8 de junio de 2018

USO DE ANTIMICROBIANOS MEDIANTE EL GLOBAL POINT PREVALENCE SURVEY OF ANTIMICROBIALCONSUMPTION AND RESISTANCE

María Dolores Menéndez Fraga, Ann Versporten, Ana Fernández Blázquez, Francisco Carreño Alonso, Herman Goossens, Fernando Vázquez Valdés.

Unidad de Calidad y Gestión del Riesgo Clínico, Hospital Monte Naranco, Hospital Universitario Central de Asturias, Faculty of Medicine and Health Sciences, Antwerp, Belgium

Introducción:

Actualmente problema de **multirresistencia a los antimicrobianos** por lo que es necesario su **monitorización** en hospitales.

Línea prioritaria para la OMS.

El Estudio Mundial de Prevalencia de Consumo y Resistencia de Antibióticos **(Global-PPS)** permite **identificar áreas problemáticas e investigar el impacto de las medidas encaminadas a la optimización de la prescripción antibiótica.**

Herramienta de evaluación: La plataforma en internet utilizada para el registro de datos, validación y elaboración de informes, diseñada por la Universidad de Amberes, Bélgica **(www.globalpps.com).**

Objetivo:

Analizar el uso de antimicrobianos y **evaluar** la **variación en su prescripción** dentro de nuestro hospital, y para ello se **utilizó el Global-PPS** que está financiado a nivel europeo por la compañía bioMérieux.

Material y Métodos:

Ámbito: Unidad de Calidad del Hospital Monte Naranco.
Marco: Hospital de 204 camas y asociado a la Universidad, fundamentalmente **pacientes agudos geriátricos y quirúrgicos.**
Enfoque: Proceso transversal dentro del nivel estratégico del mapa de procesos del HMN.
Metodología: Incluidos **todos los pacientes hospitalizados que recibieron un antimicrobiano (AM) en el día de la PPS.** Se incluyeron datos de los AM, los motivos y las indicaciones para el tratamiento, así como un conjunto de indicadores de calidad.
Periodo: 20 y 22 de Junio 2017.

SERVICIO DE SALUD DEL PRINCIPADO DE ASTURIAS

Hospital Monte Naranco

RESULTADOS

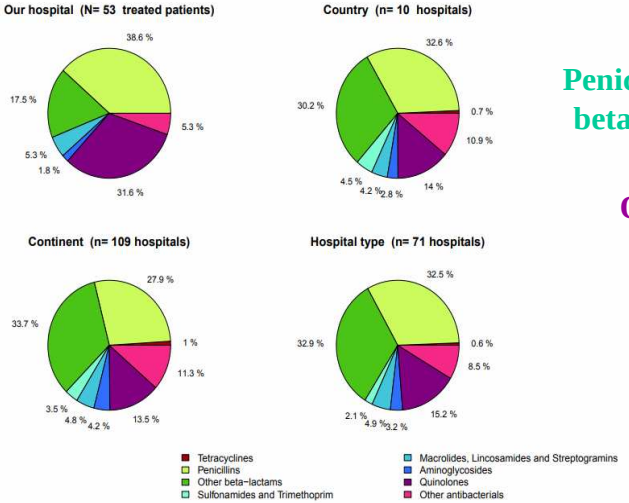
Antimicrobial prevalence in adult wards (2017)

	Total	AMW	HO−AMW	T−AMW	P−AMW	ASW	AICU
Our hospital							
patients (N)	111	90	0	0	0	21	0
treated patients (%)	47.7	51.1	0	0	0	33.3	0
Country							
patients (N)	3737	1914	101	12	149	1425	136
treated patients (%)	34.1	28	71.3	91.7	65.8	33.4	59.6
Continent							
patients (N)	30998	15858	1179	49	972	11284	1656
treated patients (%)	29.6	23.4	41.3	81.6	47.6	31.2	57.7
Hospital type							
patients (N)	17781	9996	504	0	560	5936	785
treated patients (%)	27.3	22	40.5	0	44.8	30.1	53

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

Country: SPAIN ; Continent: Europe ; Hospital type: Primary or secondary hospital
If there are less than three participating hospitals, results are not reported.

Overall proportional antibiotic use (2017)



56,1%
Penicilina/otros betalactámicos
31,6%
Quinolonas

Percentage of antibacterials for systemic use (ATC J01) at ATC3 level (pharmacological subgroup). Proportional antibiotic use below 0.5% is not reported.
ICU patients refers to patients treated on an ICU department recorded with activity IC.

Country: SPAIN ; Continent: Europe ; Hospital type: Primary or secondary hospital If there are less than three participating hospitals, results are not reported.

Therapeutic antimicrobial use for community acquired and healthcare associated infections by type of treatment (2017)

	CAI Empiric		CAI Targeted		CAI Total	
	N	%	N	%	N	%
Our hospital	41	83.7	8	16.3	49	94.2
Country	698	82.8	145	17.2	843	59.9
Continent	4548	78.9	1213	21.1	5761	63.7
Hospital type	2533	77.0	758	23.0	3291	70.9

	HAI Empiric		HAI Targeted		HAI Total	
	N	%	N	%	N	%
Our hospital	3	100.0	0	0.0	3	5.8
Country	350	62.1	214	37.9	564	40.1
Continent	1859	56.6	1427	43.4	3286	36.3
Hospital type	781	57.9	569	42.1	1350	29.1

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: SPAIN ; Continent: Europe ; Hospital type: Primary or secondary hospital
If there are less than three participating hospitals, results are not reported.

Ten most common diagnoses to be treated with therapeutic antimicrobials (2017)

	Our hospital		Country		Continent		Hospital type	
Diagnosis	N	%	N	%	N	%	N	%
Pneu	32	66.7	289	26.7	1779	25.2	991	25.5
Cys	7	14.6	56	5.2	614	8.7	386	9.9
Bron	5	10.4	89	8.2	410	5.8	273	7.0
GI	1	2.1	43	4.0	293	4.1	127	3.3
Proph BJ	1	2.1	1	0.1	6	0.1	2	0.1
Pye	1	2.1	72	6.7	502	7.1	297	7.7
SST	1	2.1	132	12.2	794	11.2	443	11.4

PULM 66,7%
VUBJ 14,6%
BRON 10,4%

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: SPAIN Continent: Europe Hospital type: Primary or secondary hospital
If there are less than three participating hospitals, results are not reported.

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

Hospital Monte Naranco

Prophylactic antimicrobial use by indication (2017)

	Medical		Surgical	
	N	%	N	%
Our hospital	0	0.0	5	100.0
Country	188	41.6	264	58.4
Continent	1745	43.7	2248	56.3
Hospital type	383	27.3	1021	72.7

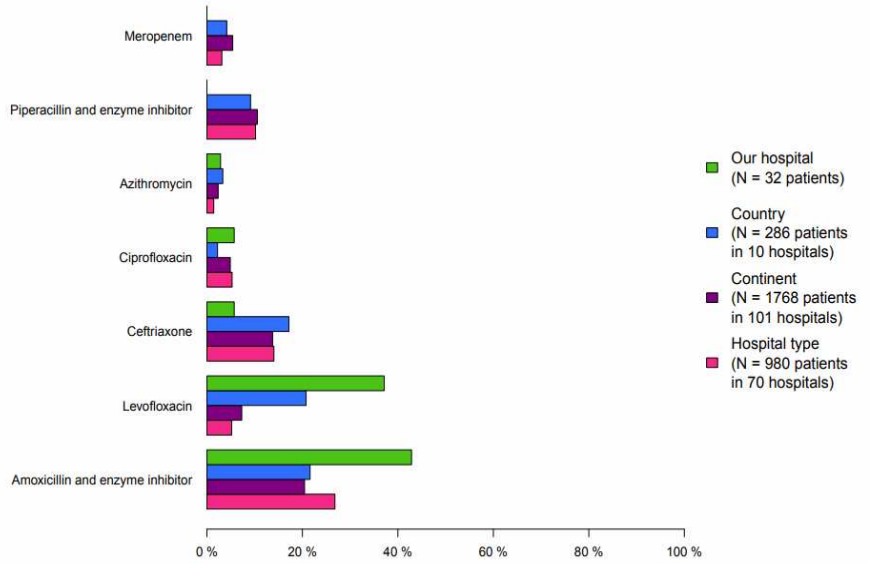
Percentage of antimicrobials prescribed for medical or surgical prophylaxis. Antimicrobials include the antibacterials, antifungals and antivirals for systemic use as well as antibiotics used as intestinal anti−infectives and drugs to treat tuberculosis.

Country: SPAIN ; Continent: Europe ; Hospital type: Primary or secondary hospital
If there are less than three participating hospitals, results are not reported.

Summary of quality indicators for antibiotic use (2017)

	Hospital		Country		Continent		Hospital type	
	N	%	N	%	N	%	N	%
Medical								
Reason in notes	50	100.0	874	85.1	5103	82.3	2709	88.6
Guidelines missing	0	0.0	94	9.2	1032	16.6	429	14.0
Guideline compliant	46	100.0	543	73.7	3037	76.4	1828	80.9
Stop/review date documented	33	66.0	175	17.0	2238	36.1	1347	44.0
Surgical								
Reason in notes	7	100.0	427	69.8	3359	75.2	1739	80.1
Guidelines missing	0	0.0	45	7.4	794	17.8	265	12.2
Guideline compliant	7	100.0	317	68.6	1959	68.3	1106	69.5
Stop/review date documented	7	100.0	162	26.5	1827	40.9	1068	49.2

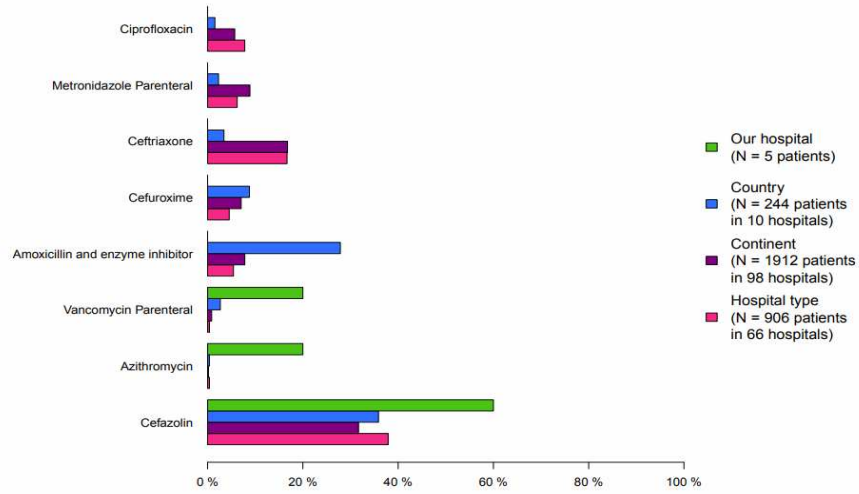
Top 5 most frequently used antibiotics for pneumonia in adults and children (2017)



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: SPAIN ; Continent: Europe ; Hospital type: Primary or secondary hospital
If there are less than three participating hospitals, results are not reported.

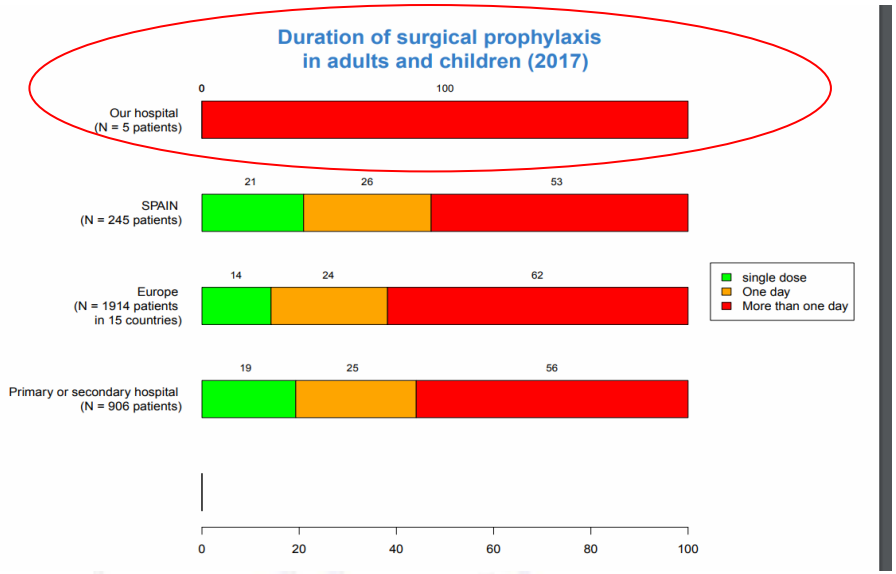
Top 5 most frequently used antibiotics for surgical prophylaxis in adults and children (2017)



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: SPAIN ; Continent: Europe ; Hospital type: Primary or secondary hospital
If there are less than three participating hospitals, results are not reported.

Hospital Monte Naranco



Key prescription patterns (adults and children) (2017)

	Hospital		Country		Continent		Hospital type	
	N	%	N	%	N	%	N	%
All patients								
IV therapy	33	62.3	1183	83.9	7589	77.8	3685	74.4
Multiple ATB diagnosis	4	7.5	275	18.6	1811	18.0	659	13.1
Multiple ATB patient	4	7.5	320	22.7	2038	20.9	736	14.9
Medical								
IV therapy	26	55.3	626	73.8	3511	66.6	1768	63.7
Multiple ATB diagnosis	4	8.7	164	19.4	815	15.6	284	10.4
Multiple ATB patient	4	8.7	198	25.0	957	19.1	330	12.3
Surgical								
IV therapy	7	100.0	464	87.1	3083	81.1	1512	78.5
Multiple ATB diagnosis	0	0.0	76	14.4	642	17.1	271	14.4
Multiple ATB patient	0	0.0	82	15.7	690	18.6	291	15.6
ICU								
IV therapy	0	0.0	93	94.9	995	93.0	405	96.9
Multiple ATB diagnosis	0	0.0	35	32.7	354	31.9	104	24.2
Multiple ATB patient	0	0.0	40	41.7	391	37.7	115	27.7

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: SPAIN ; Continent: Europe ; Hospital type: Primary or secondary hospital
If there are less than three participating hospitals, results are not reported.

SERVICIO DE SALUD
DEL PRINCIPADO DE ASTURIAS

Hospital Monte Naranco

Treatment based on microbiology data (2017)

	Hospital		Country		Continent		Hospital type	
	N	%	N	%	N	%	N	%
	0	0.0	0	0.0	0	0.0	0	0.0
MRSA	0	0.0	15	1.5	70	1.0	29	0.8
MRCoNS	0	0.0	17	1.7	60	0.9	13	0.3
VRE	0	0.0	0	0.0	10	0.1	2	0.1
ESBL	0	0.0	19	1.8	149	2.2	81	2.2
3−ceph	0	0.0	10	1.0	77	1.2	54	1.4
CRE	0	0.0	1	0.1	31	0.5	15	0.4
ESBL−NF	0	0.0	4	0.4	54	0.8	15	0.4
CR−NF	1	2.1	4	0.4	38	0.6	13	0.3
Other MDR	0	0.0	4	0.4	160	2.4	58	1.6
Any of the above	1	2.1	68	6.6	564	8.4	241	6.4

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: SPAIN ; Continent: Europe ; Hospital type: Primary or secondary hospital
If there are less than three participating hospitals, results are not reported.

Conclusiones

- Mediante el **Global-PPS 2017** se han puesto en marcha medidas a través de la **Comisión Clínica de Infección Hospitalaria y Política Antibiótica** para **mejorar la adecuación de la profilaxis antibiótica del hospital** y en concreto la PAQ en cirugía traumatológica y ortopédica (>1 día de lo establecido en protocolo):

  a) retroalimentación de los resultados a los profesionales implicados.

  b) introducción en la historia clínica electrónica de un "power plan" y un mensaje recordatorio en la pantalla del ordenador.

  c) correo electrónico de información para facultativos médicos y quirúrgicos a través de la Dirección Médica.

  d) información Dirección y Supervisoras de Enfermería, y colocación de cartelería con instrucciones en las UEH.

  e) monitorización de indicadores por el Servicio de Farmacia.

Mejoría en el EPINE 2018: duración PAQ correcto en el 67%.