Table 1. Characteristics of respondents to the Antimicrobial user survey and comparison per country. UK positions/role are displayed in the table. The survey version for Spain included the equivalent positions "adjunto" (consultant), R3-5 (ST3 to ST6) and R1-2 (F1-2/CT1-CT2). Data is shown as frequencies and column percentages.

	Spain	**UK**	**Total**	**p-value**
No. of Respondents	94	332	426	
Position				**0.026**
Consultant	60 (64%)	182 (55%)	242 (57%)	
ST3-ST6	9 (10%)	73 (22%)	82 (19%)	
F1-F2/ CT1-CT2	25 (27%)	77 (23%)	102 (24%)	
Specialty type (n, %)				0.301
Medical Specialties	85 (90%)	283 (86%)	368 (86%)	
▪ Internal Medicine	28 (30%)	56 (17%)	84 (20%)	
▪ Family Medicine	15 (16%)	9 (3%)	24 (6%)	
▪ Emergency Medicine	1 (1%)	21 (6%)	22 (5%)	
▪ Intensive Medicine	6 (6%)	32 (10%)	38 (9%)	
▪ Geriatrics	5 (5%)	12 (4%)	17 (4%)	
▪ Pediatrics	6 (6%)	41 (12%)	47 (11%)	
▪ Infection /Medical Microbiology	0 (0%)	34 (10%)	34 (8%)	
▪ Other clinical specialty	24 (26%)	78 (24%)	102 (24%)	
Surgical specialties	9 (10%)	49 (15%)	58 (14%)	
▪ General Surgery	3 (3%)	9 (3%)	12 (3%)	
▪ Trauma/Orthopedics	2 (2%)	8 (2%)	10 (2%)	
▪ Other surgical specialty	4 (4%)	32 (10%)	36 (9%)	

Table 2. Potential influence of country, specialty and seniority on the type of antimicrobial management choice and univariate analysis. Each type of response (microbiologically optimal antimicrobial choice or MOAC, sub-optimal and request for support) are shown as N of individual responses (% over the antimicrobial choice category). P values are for overall comparison within each category (country, specialty, seniority).

	MOAC N (%)		**Sub-optimal** N (%)		**Support** N (%)		**p-value**
Country							**< 0.001**
• UK	596	(51)	212	(18)	362	(31)	
• Spain	210	(65)	92	(28)	22	(7)	
Specialty							**0.041**
• Surgical	97	(47)	42	(20)	67	(33)	
• Medical	709	(55)	262	(20)	317	(25)	
Seniority							0.096
• Senior	625	(55)	233	(21)	276	(24)	
• Not senior	181	(50)	71	(20)	108	(30)	

Table 3. Potential influence of the case characteristics (susceptibility of the isolate, concordance of the clinical course with the appropriateness of the empirical antimicrobial therapy, day time when susceptibility results were notified) on the type of answer: univariate analysis. Here, the frequencies represent the total number of responses given by all respondents. Column percentages are calculated as the number of the specific type of response divided by the total number of valid answers given per column category, and multiplied by 100.

	Valid answers	**MOAC N (%)**		**Sub-optimal N (%)**		**Support N (%)**		**P for overall differences**
Case number								**<0.001**
• Case 1 (C1)	390	289	(74)	83	(21)	18	(5)	
• Case 2 (C2)	377	251	(67)	17	(5)	109	(29)	
• Case 3 (C3)	368	147	(40)	113	(31)	108	(29)	
• Case 4 (C4)	359	119	(33)	91	(25)	149	(42)	
Clinical course & antibiotic appropriateness concordance								**< 0.001**
• Concordant (C1,C2)	767	540	(70)	100	(26)	127	(17)	
• Discordant (C3, C4)	727	266	(37)	204	(28)	257	(35)	
Isolate susceptibility								**< 0.001**
• Susceptible (C1, C3)	758	436	(58)	196	(26)	126	(17)	
• Resistant (C2, C4)	736	370	(50)	108	(15)	258	(35)	
Clinical condition								**0.002**
• Well (C1,C4)	749	408	(55)	174	(23)	167	(22)	
• Unwell (C2,C3)	745	398	(53)	130	(17)	217	(29)	
Notification of susceptibility results								**0.002**
• Normal working hours	749	408	(55)	174	(23)	167	(22)	
• Out of working hours	745	398	(53)	130	(17)	217	(29)	

Table 4. Factors influencing appropriateness of antimicrobial choice: results of the multinomial logistic regression analysis. The results are expressed as adjusted OR (95% CI) for each of the variables included in the model for A) request for support and B) optimal choice selection, both using inappropriate antimicrobial choice as the reference category.

Variables	P (Wald)	OR	95% CI
A.REQUEST FOR SUPPORT			
Spain (vs UK)	***<0.001***	***0.13***	***0.08 – 0.21***
Senior doctor (vs junior)	*0.062*	*0.70*	*0.49 – 1.02*
Medical specialty (vs surgical specialty)	*0.269*	*0.78*	*0.50 – 1.22*
Discordant clinical course (vs concordant)	*0.604*	*1.12*	*0.74 – 1.68*
Resistant isolate (vs susceptible)	***< 0.001***	***7.66***	***5.07 – 11.57***
Clinically unwell (vs clinically well)	***< 0.001***	***4.26***	***2.82 – 6.43***
B. OPTIMAL ANTIMICROBIAL CHOICE			
Spain (vs UK)	*0.222*	*0.83*	*0.61 – 1.12*
Senior doctor (vs junior)	*0.707*	*1.07*	*0.77 – 1.48*
Medical specialty (vs surgical specialty)	*0.322*	*1.23*	*0.82 – 1.84*
Discordant clinical course (vs concordant)	***< 0.001***	***0.18***	***0.13 – 0.25***
Resistant isolate (vs susceptible)	***< 0.001***	***2.08***	***1.50- 2.90***
Clinically unwell (vs clinically well)	***< 0.001***	***2.06***	***1.48 – 2.87***

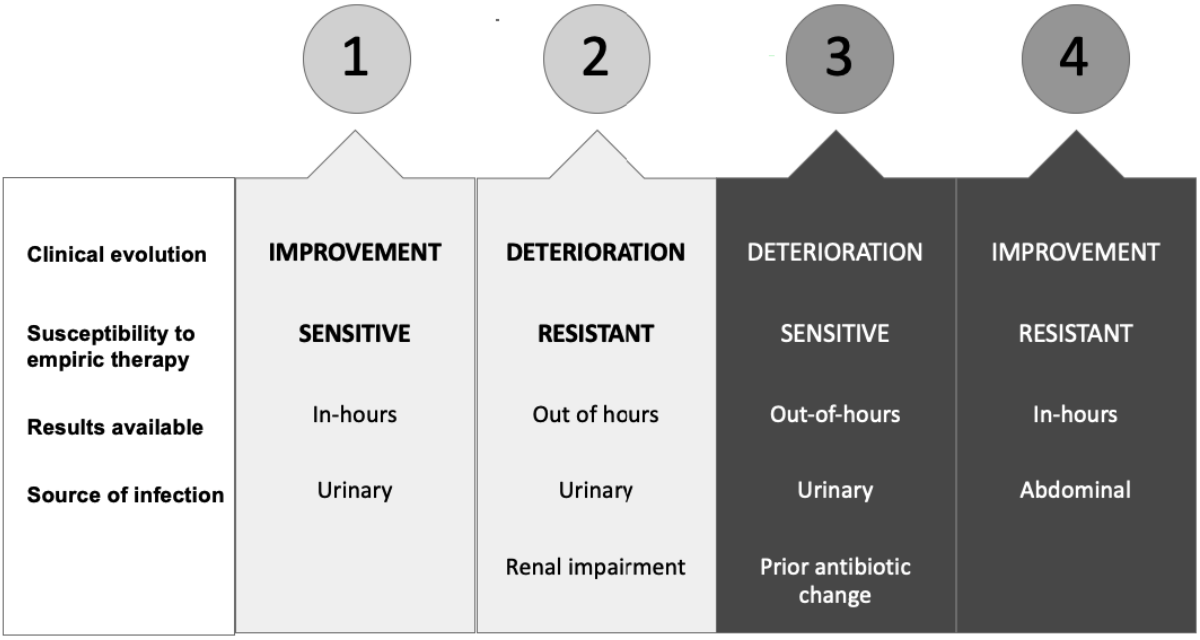

Figure 1. Summary chart of each clinical case scenario, showing antimicrobial susceptibility report, clinical severity at the time of the report, time of the day when results were reported, source and other relevant details. These clinical scenarios aimed to emulate potential real situations in routine clinical practice.

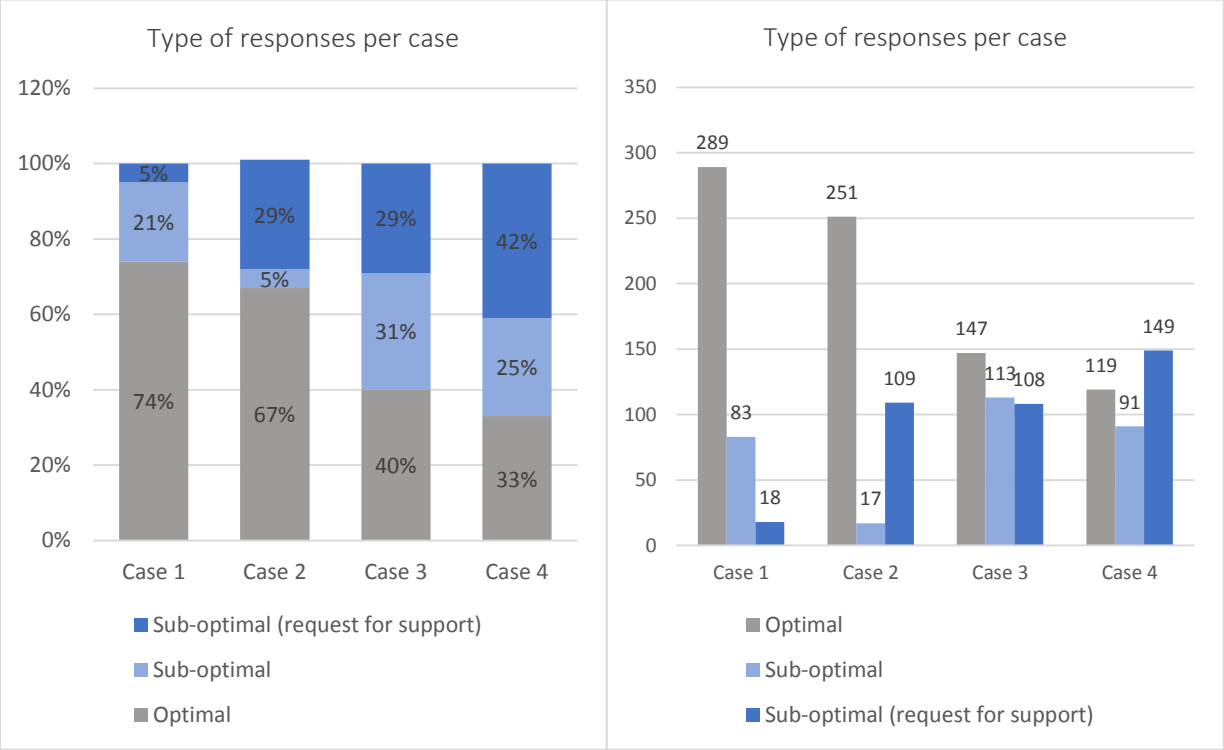

Figure 2. Type of responses per case. Left: Proportion of total responses for each case scenario question according to “microbiologically optimal” and “sub-optimal” antibiotic choice. Right: Total responses (%) for each clinical case based.