



Foto: Nicola Franceschini



Ordine dei Medici
Chirurghi e Odontoiatri
di Trento



07 Ottobre 2023

CONVEGNO NAZIONALE ANTIBIOTICO RESISTENZA: UNA PANDEMIA SILENZIOSA

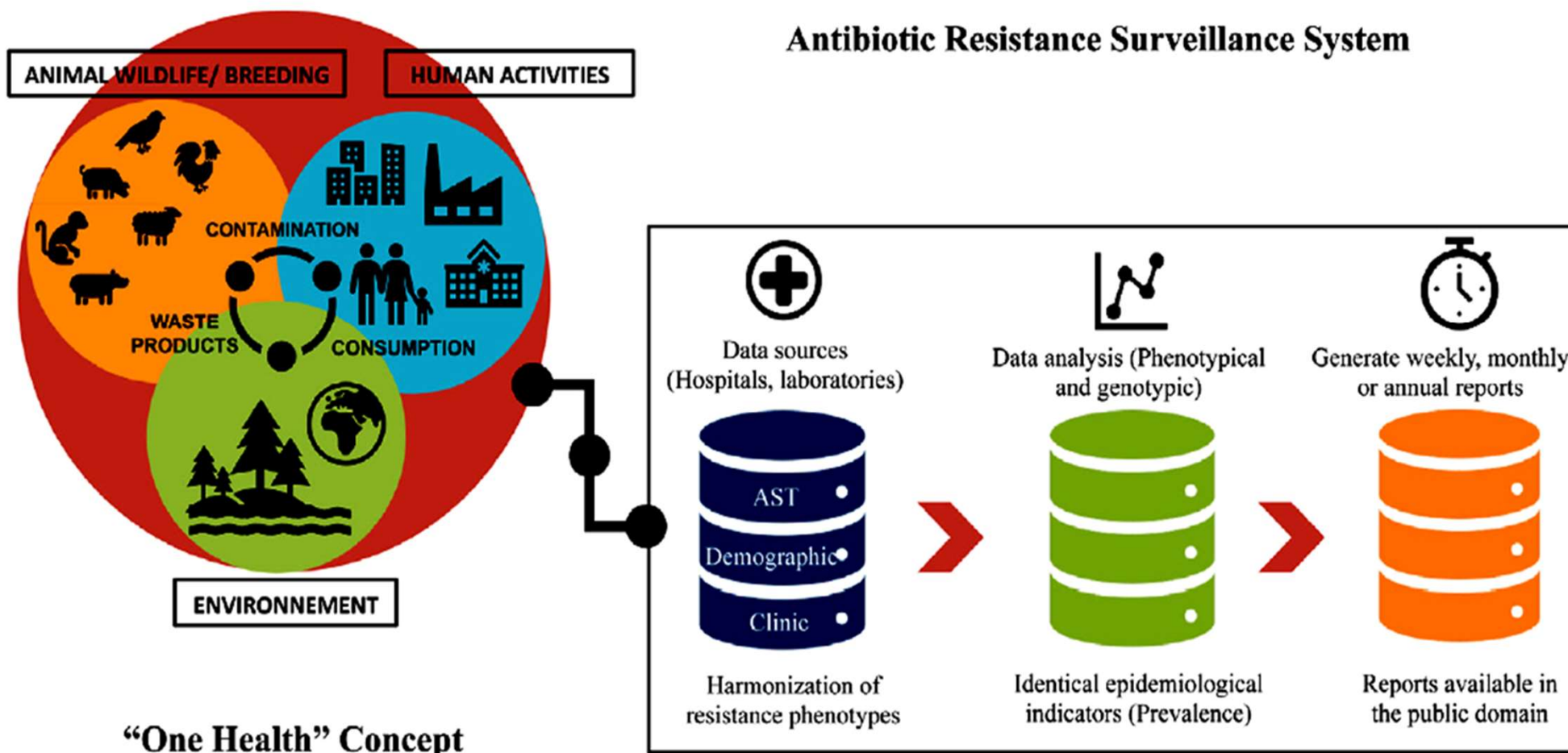
La situazione in Trentino

Claudio Scarparo

Direttore U.O.M. di Microbiologia e Virologia
Ospedale Santa Chiara - APSS Trento

Antibiotic resistance surveillance systems: A review

Diallo OO., et al. J Glob Antimicrob Resist. 2020 Dec;23:430-438.



Future antibiotic resistance surveillance system.

MICROORGANISMI E MATERIALI BIOLOGICI

Staphylococcus aureus

Enterococcus faecalis

Enterococcus faecium

Escherichia coli

Klebsiella pneumoniae

Pseudomonas aeruginosa

Acinetobacter baumannii

Materiali biologici:

Emocolture

Campioni respiratori

Urinocolture

Quando il numero di isolati risulta inferiore a 30, il report epidemiologico ha una scarsa significatività statistica, e per tale motivo le combinazioni materiale/microorganismo con isolamenti inferiori 30 non sono presenti come tabelle ma come dati sintetici per i singoli Presidi Ospedalieri.

IMPORTANTE

S

R

FINO AL 2018

% S

% I + % R

DAL 2019

% S + % I

% R

INTERPRETAZIONE TABELLE

SENSIBILE

INTERMEDIO

RESISTENTE

Staphylococcus aureus

Pazienti interni

EMOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8
APSS - TN	OXACILLINA	141	85.8			44.7	35.4	5.7	0.0	14.2	
APSS - TN	CLINDAMICINA	141	76.6		62.4	14.2	0.0	22.0	1.4		
APSS - TN	ERITROMICINA	141	76.6			1.4	62.4	12.8	0.0	16.3	7.1
APSS - TN	GENTAMICINA	141	92.9				25.5	64.6	2.8	0.0	7.1
APSS - TN	RIFAMPICINA	141	98.6	98.6	0.0	0.0	0.0	0.7	0.7		
APSS - TN	LEVOFLOXACINA	141	86.5		13.5	6.4	65.2	1.4	0.7	2.1	10.7
APSS - TN	TETRACICLINA	141	95.0					93.6	1.4	5.0	
APSS - TN	TRIMET-SULFA	141	99.3					97.9	0.7	0.7	0.7
APSS - TN	VANCOMICINA	141	100.0			0.7	30.5	68.1	0.7		
APSS - TN	TEICOPLANINA	141	99.3				20.6	75.2	3.5	0.7	
APSS - TN	LINEZOLID	141	100.0				2.8	5.0	82.3	9.9	
APSS - TN	DAPTOMICINA	141	100.0		1.4	68.8	21.3	8.5			
APSS - TN	TIGECICLINA	141	100.0		24.8	72.4	2.8				
2022	Antimicrobico	N. ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8

Staphylococcus aureus

Pazienti interni

M. RESPIRATORI

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8
APSS - TN	OXACILLINA	123	85.3			43.9	32.5	8.9	0.0	14.7	
APSS - TN	CLINDAMICINA	123	78.1		66.7	11.4	0.0	19.5	2.4		
APSS - TN	ERITROMICINA	123	70.7				63.4	7.3	0.0	16.3	13.0
APSS - TN	GENTAMICINA	123	91.1				23.6	64.2	3.3	0.8	8.1
APSS - TN	LEVOFLOXACINA	123	83.7		10.6	8.1	62.6	2.4	0.8	2.5	13.0
APSS - TN	TETRACICLINA	123	95.1					94.3	0.8	4.9	
APSS - TN	TRIMET-SULFA	123	100.0					98.4	1.6		
APSS - TN	VANCOMICINA	123	100.0				31.7	65.0	3.3		
APSS - TN	TEICOPLANINA	123	100.0				25.2	71.5	3.3		
APSS - TN	LINEZOLID	123	99.2					3.3	83.7	12.2	0.8
APSS - TN	DAPTOMICINA	123	98.4				65.1	26.0	7.3	1.6	
APSS - TN	TIGECICLINA	123	100.0		22.8	77.2					
2022	Antimicrobico	N. ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8

Staphylococcus aureus

Pazienti interni

URINOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8
APSS - TN	OXACILLINA	32	75.0			28.1	31.3	15.6	0.0	25.0	
APSS - TN	GENTAMICINA	32	78.1				15.6	53.1	9.4	3.1	18.8
APSS - TN	LEVOFLOXACINA	32	65.6			9.4	53.1	3.1	0.0	0.0	34.4
APSS - TN	TETRACICLINA	32	90.6					87.5	3.1	9.4	
APSS - TN	TRIMET-SULFA	32	100.0					93.7	0.0	6.3	
APSS - TN	VANCOMICINA	32	100.0			3.1	34.4	59.4	3.1		
APSS - TN	TEICoplanina	32	100.0				15.6	78.1	6.3		
APSS - TN	LINEZOLID	32	100.0						90.6	9.4	
APSS - TN	DAPTOMICINA	32	100.0			59.4	31.2	9.4			
APSS - TN	TIGECICLINA	32	100.0		18.7	75.0	6.3				
2022	Antimicrobico	N. ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8

EARS-NET 2021: *Staphylococcus aureus*
% of invasive isolates with resistance to Meticillin (MRSA):

ITALIA	2021	30.0%
APSS - TN Emocolture	2022	14.2%
APSS - TN Respiratori	2022	14.7%
APSS - TN Urinocolture	2022	25.0%

Enterococcus faecalis

Pazienti interni

EMOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	≤HL	>HL
APSS - TN	AMPICILLINA	63	100.0				60.3	36.5	3.2					
APSS - TN	GENTAMICINA HL	63	74.6										74.6	25.4
APSS - TN	VANCOMICINA	63	100.0		1.6	9.5	66.7	22.2						
APSS - TN	TEICoplanina	63	100.0			20.6	77.8	1.6						
APSS - TN	LINEZOLID	63	100.0				14.3	80.9	4.8					
APSS - TN	TIGECICLINA	63	100.0	22.2	77.8									
2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	≤HL	>HL

Enterococcus faecalis

Pazienti interni

M. RESPIRATORI

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	≤HL	>HL
APSS - TN	AMPICILLINA	35	100.0				54.3	45.7						
APSS - TN	GENTAMICINA HL	35	71.4										71.4	28.6
APSS - TN	VANCOMICINA	35	100.0			2.9	74.3	22.8						
APSS - TN	TEICoplanina	35	100.0			31.4	68.6							
APSS - TN	LINEZOLID	35	100.0				17.1	80.0	2.9					
APSS - TN	TIGECICLINA	35	100.0	34.3	65.7									
2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	≤HL	>HL

Enterococcus faecalis

Pazienti interni

URINOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	≤HL	>HL
APSS - TN	AMPICILLINA	369	99.5				58.0	38.2	3.3	0.0	0.5						
APSS - TN	GENTAMICINA HL	369	65.6													65.6	34.4
APSS - TN	LEVOFLOXACINA	369	73.1		1.0	10.3	40.1	20.1	1.6	20.1	6.8						
APSS - TN	NITROFURANTOINA	369	99.7								27.6	71.6	0.5	0.3			
APSS - TN	VANCOMICINA	369	99.7		0.5	7.0	72.4	19.5	0.3	0.0	0.0	0.3					
APSS - TN	TEICOPLANINA	369	99.7			24.1	74.8	0.8	0.0	0.0	0.3						
APSS - TN	LINEZOLID	369	99.2				14.4	78.6	6.2	0.0	0.8						
APSS - TN	TIGECICLINA	369	100.0	28.5	71.5												
2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	≤HL	>HL

Enterococcus faecium

Pazienti interni

EMOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	≤HL	>HL
APSS - TN	AMPICILLINA	38	18.4				10.5	7.9	0.0	0.0	81.6			
APSS - TN	GENTAMICINA HL	38	68.4										68.4	31.6
APSS - TN	VANCOMICINA	38	81.6			52.7	23.7	2.6	2.6	2.6	15.8			
APSS - TN	TEICOPLANINA	38	84.2			18.4	60.5	5.3	0.0	15.8				
APSS - TN	LINEZOLID	38	100.0				34.2	65.8						
APSS - TN	TIGECICLINA	38	100.0	21.1	78.9									
2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	≤HL	>HL

Enterococcus faecium

Pazienti interni

M. RESPIRATORI

ANNO 2022

ARCO

0 Isolati: 0 VRE (0.0%)

BORGO

1 Isolati: 0 VRE (0.0%)

CAVALESE

1 Isolati: 0 VRE (0.0%)

CLES

1 Isolati: 0 VRE (0.0%)

ROVERETO

0 Isolati: 0 VRE (0.0%)

TIONE

0 Isolati: 0 VRE (0.0%)

TRENTO

8 Isolati: 1 VRE (12.5%)

Enterococcus faecium

Pazienti interni

URINOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	≤HL	>HL
APSS - TN	AMPICILLINA	106	3.8				0.9	2.0	0.9	0.0	96.2			
APSS - TN	GENTAMICINA HL	106	48.1										48.1	51.9
APSS - TN	LEVOFLOXACINA	106	2.9			0.9	0.0	2.0	0.0	73.5	23.6			
APSS - TN	VANCOMICINA	106	72.6		2.8	51.9	14.1	0.0	3.8	0.0	0.0	27.4		
APSS - TN	TEICOPLANINA	106	70.8			18.9	50.0	1.9	1.9	1.9	25.4			
APSS - TN	LINEZOLID	106	99.1				39.6	55.7	3.8	0.9				
APSS - TN	TIGECICLINA	106	100.0	24.5	75.5									
2022	Antimicrobico	N. ceppi	% S	0.12	0.25	0.5	1	2	4	8	16	32	≤HL	>HL

EARS-NET 2021: % of invasive isolates with resistance:

Enterococcus faecalis
high-level resistance to gentamicin

Enterococcus faecium
resistance to vancomycin

ITALIA

2021

36.3%

ITALIA

2021

28.2%

**APSS - TN
Emocolture**

2022

25.4%

**APSS - TN
Emocolture**

2022

18.4%

**APSS - TN
Respiratori**

2022

28.6%

**APSS - TN
Respiratori**

2022

9.1%

**APSS - TN
Urinocolture**

2022

34.4%

**APSS - TN
Urinocolture**

2022

27.4%

Escherichia coli

Pazienti interni

EMOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	AMOXII/CLAV	421	62.3						7.6	3.6	51.1	11.4	12.8	13.5		
APSS - TN	PIPERA/TAZO	421	88.1							19.7	68.4	0.2	9.8	1.2	0.7	
APSS - TN	CEFTRIAXONE	421	79.6			18.3	0.0	60.8	0.5	0.7	0.2	0.0	0.0	19.5		
APSS - TN	CEFTAZIDIME	421	82.2		15.2	2.4	1.2	60.3	1.2	1.9	3.6	1.9	4.0	7.4	0.9	
APSS - TN	CEFEPIME	421	80.9		17.3	0.2	60.3	0.7	1.7	0.7	2.6	15.5	1.0			
APSS - TN	CEFTAZ/AVIBAC	320	100.0						99.1	0.9						
APSS - TN	CEFTOL/TAZOBAC	320	98.5					97.2	1.3	0.6	0.9					
APSS - TN	CIPROFLOXACINA	421	72.9	63.7	0.7	5.2	3.3	1.2	19.0	6.9						
APSS - TN	AMIKACINA	421	95.7					1.2	15.9	6.2	72.4	3.6	0.7			
APSS - TN	GENTAMICINA	421	90.3					21.4	68.9	1.4	5.7	2.6				
APSS - TN	FOSFOMICINA	421	98.8									97.1	1.7	0.5	0.7	
APSS - TN	ERTAPENEM	421	100.0		99.3	0.2	0.5									
APSS - TN	IMIPENEM	421	100.0			23.5	0.5	76.0								
APSS - TN	MEROPENEM	421	100.0		76.0	24.0										
APSS - TN	COLISTINA	320	99.1					0.6	98.5	0.3	0.6					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Escherichia coli

Pazienti interni

M. RESPIRATORI

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	AMOXII/CLAV	74	52.7						4.1	4.1	44.5	8.1	5.4	33.8		
APSS - TN	PIPERA/TAZO	74	82.4							21.6	60.8	0.0	12.2	2.7	2.7	
APSS - TN	CEFTRIAXONE	74	89.2			24.4	0.0	63.5	1.3	0.0	1.3	0.0	0.0	9.5		
APSS - TN	CEFTAZIDIME	74	91.9		23.0	0.0	1.3	66.2	0.0	1.4	2.7	1.3	0.0	1.4	2.7	
APSS - TN	CEFEPIME	74	87.9		24.4	0.0	62.2	0.0	1.3	0.0	1.3	8.1	2.7			
APSS - TN	CEFTAZ/AVIBAC	53	100.0						100.0							
APSS - TN	CEFTOL/TAZOBAC	53	98.1					96.2	1.9	0.0	1.9					
APSS - TN	CIPROFLOXACINA	74	73.0	71.7	0.0	0.0	1.3	1.3	14.9	10.8						
APSS - TN	AMIKACINA	74	100.0					2.7	14.9	10.8	71.6					
APSS - TN	GENTAMICINA	74	94.6					25.7	68.9	1.3	2.7	1.4				
APSS - TN	FOSFOMICINA	74	98.6									97.3	1.3	0.0	1.4	
APSS - TN	ERTAPENEM	74	100.0		98.7	1.3										
APSS - TN	IMIPENEM	74	100.0			27.0	1.3	71.7								
APSS - TN	MEROPENEM	74	100.0		71.6	28.4										
APSS - TN	COLISTINA	53	100.0						100.0							
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Escherichia coli

Pazienti interni

URINOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	AMOXI/CLAV	1385	84.3						2.3	1.4	65.0	10.8	4.8	15.7		
APSS - TN	PIPERA/TAZO	1385	91.4							9.3	82.1	0.1	7.4	0.8	0.3	
APSS - TN	CEFTRIAXONE	1385	82.3			5.2	0.0	76.8	0.3	0.2	0.4	0.8	1.0	15.3		
APSS - TN	CEFTAZIDIME	1385	86.1		4.0	0.8	0.7	77.4	1.0	2.2	4.1	1.9	3.6	3.6	0.7	
APSS - TN	CEFEPIME	1385	85.3		5.5	0.1	75.6	1.1	1.6	1.4	2.2	12.0	0.5			
APSS - TN	CEFTAZ/AVIBAC	1243	100.0						99.3	0.5	0.2					
APSS - TN	CEFTOL/TAZOBAC	1243	97.7					96.8	0.9	1.4	0.9					
APSS - TN	CIPROFLOXACINA	1385	77.5	70.5	0.1	6.0	0.9	1.8	16.3	4.4						
APSS - TN	AMIKACINA	1385	96.2					0.6	5.9	3.2	86.5	3.2	0.6			
APSS - TN	GENTAMICINA	1385	88.4					8.6	79.8	3.6	6.3	1.7				
APSS - TN	FOSFOMICINA IV	1385	97.2									94.2	3.0	1.2	1.6	
APSS - TN	NITROFURANTOINA	1385	97.1									9.8	0.4	86.9	2.9	
APSS - TN	TRIMET/SULFA	1385	74.6						73.8	0.8	22.4	3.0				
APSS - TN	ERTAPENEM	1385	99.8		99.5	0.1	0.2	0.1	0.1							
APSS - TN	IMIPENEM	1385	99.9			10.0	0.2	89.3	0.3	0.1	0.1					
APSS - TN	MEROPENEM	1385	100.0		89.6	10.3	0.0	0.1								
APSS - TN	COLISTINA	1243	98.6						98.6	0.3	1.1					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Klebsiella pneumoniae

Pazienti interni

EMOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	AMOXI/CLAV	83	79.5						15.7	1.2	62.6	2.4	7.2	10.9		
APSS - TN	PIPERA/TAZO	83	88.0							15.7	72.3	2.4	9.6			
APSS - TN	CEFTRIAXONE	83	89.2			16.9	0.0	72.3	0.0	0.0	0.0	0.0	0.0	10.8		
APSS - TN	CEFTAZIDIME	83	89.2		13.3	3.6	0.0	72.3	0.0	0.0	0.0	2.4	3.6	4.8		
APSS - TN	CEFEPIME	83	89.2		16.9	0.0	69.9	0.0	2.4	0.0	0.0	8.4	0.0	2.4		
APSS - TN	CEFTAZ/AVIBAC	67	98.5						97.0	1.5	0.0	0.0	1.5			
APSS - TN	CEFTOL/TAZOBAC	67	97.0					97.0	0.0	0.0	3.0					
APSS - TN	CIPROFLOXACINA	83	91.6	84.3	2.5	4.8	0.0	2.4	6.0							
APSS - TN	AMIKACINA	83	97.6					16.9	1.2	1.2	78.3	1.2	1.2			
APSS - TN	GENTAMICINA	83	96.4					19.3	77.1	0.0	3.6					
APSS - TN	FOSFOMICINA	83	73.5									56.6	16.9	13.3	12.0	1.2
APSS - TN	ERTAPENEM	83	97.6		97.6	0.0	0.0	0.0	2.4							
APSS - TN	IMIPENEM	83	97.6			16.9	1.2	77.1	1.2	1.2	0.0	2.4				
APSS - TN	MEROPENEM	83	97.6		75.9	18.1	1.2	2.4	0.0	0.0	0.0	0.0	1.2	1.2		
APSS - TN	COLISTINA	67	97.0						97.0	1.5	1.5					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Klebsiella pneumoniae

Pazienti interni

M. RESPIRATORI

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	AMOXI/CLAV	66	86.4						10.6	6.1	69.7	1.5	6.1	6.0		
APSS - TN	PIPERA/TAZO	66	90.9							18.2	72.7	3.0	4.6	0.0	1.5	
APSS - TN	CEFTRIAXONE	66	94.0			16.7	0.0	77.3	0.0	0.0	0.0	0.0	3.0	3.0		
APSS - TN	CEFTAZIDIME	66	94.0		16.7	0.0	0.0	77.3	0.0	0.0	1.5	0.0	1.5	3.0		
APSS - TN	CEFEPIME	66	95.5		16.7	0.0	77.3	0.0	1.5	0.0	0.0	3.0	1.5			
APSS - TN	CEFTAZ/AVIBAC	53	100.0						100.0							
APSS - TN	CEFTOL/TAZOBAC	53	100.0					100.0								
APSS - TN	CIPROFLOXACINA	66	94.0	89.5	1.5	3.0	0.0	1.5	3.0	1.5						
APSS - TN	AMIKACINA	66	100.0					16.7	1.5	1.5	80.3					
APSS - TN	GENTAMICINA	66	100.0					19.7	80.3							
APSS - TN	FOSFOMICINA	66	77.3									59.1	18.2	7.6	1.5	13.6
APSS - TN	ERTAPENEM	66	98.5		98.5	0.0	0.0	0.0	0.0	1.5						
APSS - TN	IMIPENEM	66	100.0			19.7	0.0	80.3								
APSS - TN	MEROPENEM	66	100.0		80.3	19.7										
APSS - TN	COLISTINA	53	94.3						94.3	3.8	1.9					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Klebsiella pneumoniae

Pazienti interni

URINOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	AMOXI/CLAV	275	90.6						8.4	2.2	67.6	7.3	5.1	9.4		
APSS - TN	PIPER/TAZO	275	89.5							12.0	77.5	2.2	7.3	0.0	1.0	
APSS - TN	CEFTRIAXONE	275	80.3			11.6	0.0	68.7	0.0	0.4	0.0	0.4	0.0	18.9		
APSS - TN	CEFTAZIDIME	275	82.2		9.1	1.8	0.7	69.5	0.0	1.1	2.2	3.6	6.5	5.5		
APSS - TN	CEFEPIME	275	82.2		12.0	0.0	67.6	0.4	2.2	0.0	1.5	13.4	0.0	2.9		
APSS - TN	CEFTAZ/AVIBAC	226	99.6					97.8	0.9	0.9	0.4					
APSS - TN	CEFTOL/TAZOBAC	226	98.7					98.3	0.4	0.4	0.9					
APSS - TN	CIPROFLOXACINA	275	89.1	79.6	1.1	5.5	2.9	2.2	5.8	2.9						
APSS - TN	AMIKACINA	275	98.6					13.8	1.8	2.2	80.8	0.7	0.7			
APSS - TN	GENTAMICINA	275	95.6					16.0	79.6	0.0	2.6	1.8				
APSS - TN	FOSFOMICINA IV	275	66.9									52.4	14.5	11.6	18.2	3.3
APSS - TN	TRIMET/SULFA	275	82.2						82.2	0.0	14.5	0.0	3.3			
APSS - TN	ERTAPENEM	275	98.9		97.5	0.7	0.7	0.0	0.7	0.4						
APSS - TN	IMIPENEM	275	98.9		15.6	1.1	81.5	0.7	0.0	0.7	0.4					
APSS - TN	MEROPENEM	275	99.3		81.5	17.4	0.0	0.0	0.0	0.4	0.0	0.0	0.7			
APSS - TN	COLISTINA	226	97.8					97.8	0.9	1.3						
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

EARS-NET 2021: % of invasive isolates with resistance to third generation Cephalosporins:

Escherichia coli

Klebsiella pneumoniae

ITALIA

2021

23.8%

ITALIA

2021

53.3%

**APSS - TN
Emocolture**

2022

20.4%

**APSS - TN
Emocolture**

2022

10.8%

**APSS - TN
Respiratori**

2022

10.8%

**APSS - TN
Respiratori**

2022

06.0%

**APSS - TN
Urinocolture**

2022

17.7%

**APSS - TN
Urinocolture**

2022

19.7%

EARS-NET 2021: % of invasive isolates with resistance to Fluoroquinolones:

Escherichia coli

Klebsiella pneumoniae

ITALIA

2021

32.5%

ITALIA

2021

50.0%

**APSS - TN
Emocolture**

2022

27.1%

**APSS - TN
Emocolture**

2022

08.4%

**APSS - TN
Respiratori**

2022

27.0%

**APSS - TN
Respiratori**

2022

06.0%

**APSS - TN
Urinocolture**

2022

22.5%

**APSS - TN
Urinocolture**

2022

10.9%

EARS-NET 2021: % of invasive isolates with resistance to Aminoglycosides

Escherichia coli

ITALIA

2021

13.2%

**APSS - TN
Emocolture**

2022

09.7%

**APSS - TN
Respiratori**

2022

05.4%

**APSS - TN
Urinocolture**

2022

11.6%

Klebsiella pneumoniae

ITALIA

2021

30.1%

**APSS - TN
Emocolture**

2022

03.6%

**APSS - TN
Respiratori**

2022

00.0%

**APSS - TN
Urinocolture**

2022

04.4%

**EARS-NET 2021: % of invasive isolates with resistance to Carbapenems
(Imipenem, Meropenem):**

Escherichia coli

Klebsiella pneumoniae

ITALIA

2021

00.4%

ITALIA

2021

26.7%

**APSS - TN
Emocolture**

2022

00.0%

**APSS - TN
Emocolture**

2022

02.4%

**APSS - TN
Respiratori**

2022

00.0%

**APSS - TN
Respiratori**

2022

00.0%

**APSS - TN
Urinocolture**

2022

00.1%

**APSS - TN
Urinocolture**

2022

01.1%

Pseudomonas aeruginosa Pazienti interni

EMOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	PIPERAZAZO	56	82.1							3.6	69.6	8.9	12.5	0.0	3.6	1.8
APSS - TN	CEFTAZIDIME	56	82.1					14.3	42.8	21.4	3.6	3.6	3.6	7.1	3.6	
APSS - TN	CEFEPIME	56	80.4				1.8	5.4	39.3	25.0	8.9	17.8	1.8			
APSS - TN	CEFTAZ/AVIBAC	49	100.0						79.6	18.4	2.0					
APSS - TN	CEFTOL/TAZOBAC	49	100.0					100.0								
APSS - TN	CIPROFLOXACINA	56	87.5	17.8	3.6	51.8	14.3	3.6	7.1	1.8						
APSS - TN	AMIKACINA	56	100.0						7.1	10.7	71.5	10.7				
APSS - TN	IMIPENEM	56	92.9			1.8	0.0	39.3	46.4	5.4	0.0	7.1				
APSS - TN	MEROPENEM	56	98.2		26.8	8.9	5.3	53.6	1.8	1.8	0.0	0.0	0.0	1.8		
APSS - TN	COLISTINA	49	95.9						95.9	0.0	4.1					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Pseudomonas aeruginosa Pazienti interni M. RESPIRATORI

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	PIPERAZAZO	102	72.6						2.9	6.9	55.9	6.9	22.5	1.0	3.9	
APSS - TN	CEFTAZIDIME	102	78.4					22.5	36.3	9.8	9.8	7.9	1.0	8.8	3.9	
APSS - TN	CEFEPIME	102	80.4				5.9	6.9	38.2	15.7	13.7	4.9	14.7			
APSS - TN	CEFTAZ/AVIBAC	66	93.9						83.3	9.1	1.5	6.1				
APSS - TN	CEFTOL/TAZOBAC	66	95.4					90.9	3.0	1.5	4.6					
APSS - TN	CIPROFLOXACINA	102	78.4	19.6	6.9	40.2	11.7	8.8	6.9	5.9						
APSS - TN	AMIKACINA	102	95.1					4.9	3.9	23.5	55.9	6.9	4.9			
APSS - TN	IMIPENEM	102	79.5			5.9	2.0	35.3	30.4	5.9	2.9	17.6				
APSS - TN	MEROPENEM	102	92.1		25.5	11.8	3.9	35.3	3.9	2.9	8.8	1.0	4.9	2.0		
APSS - TN	COLISTINA	66	98.5						98.5	0.0	1.5					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Pseudomonas aeruginosa Pazienti interni URINOCOLTURE

APSS - TRENTO

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
APSS - TN	PIPERAZAZO	216	75.9							13.4	58.3	4.2	16.2	2.3	5.6	
APSS - TN	CEFTAZIDIME	216	83.8					9.7	53.7	12.0	8.4	4.6	3.7	4.2	3.7	
APSS - TN	CEFEPIME	216	80.1				3.7	4.6	40.3	16.7	14.8	18.1	0.0	1.8		
APSS - TN	CEFTAZ/AVIBAC	132	97.0						77.3	13.6	6.1	3.0				
APSS - TN	CEFTOL/TAZOBAC	132	99.2					93.9	3.8	1.5	0.8					
APSS - TN	CIPROFLOXACINA	216	86.6	13.4	3.2	54.2	15.8	7.4	3.7	2.3						
APSS - TN	AMIKACINA	216	97.7					4.2	10.6	21.8	50.9	10.2	2.3			
APSS - TN	IMIPENEM	216	91.2			3.7	1.9	38.9	42.1	4.6	2.8	6.0				
APSS - TN	MEROPENEM	216	96.7		19.9	17.1	8.3	41.7	4.6	2.3	2.8	1.9	0.9	0.5		
APSS - TN	COLISTINA	132	97.7						97.7	0.0	2.3					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

EARS-NET 2021: *Pseudomonas aeruginosa*
% of invasive isolates with resistance to Piperacillin + tazobactam:

ITALIA

2021

23.4%

**APSS - TN
Emocolture**

2022

17.9%

**APSS - TN
Respiratori**

2022

27.4%

**APSS - TN
Urinocolture**

2022

24.1%

EARS-NET 2021: *Pseudomonas aeruginosa*
% of invasive isolates with resistance to Ceftazidime:

ITALIA

2021

19.1%

**APSS - TN
Emocolture**

2022

17.9%

**APSS - TN
Respiratori**

2022

21.6%

**APSS - TN
Urinocolture**

2022

16.2%

EARS-NET 2021: *Pseudomonas aeruginosa*
% of invasive isolates with resistance to Fluoroquinolones:

ITALIA

2021

18.6%

**APSS - TN
Emocolture**

2022

12.5%

**APSS - TN
Respiratori**

2022

21.6%

**APSS - TN
Urinocolture**

2022

13.4%

EARS-NET 2021: *Pseudomonas aeruginosa*

% of invasive isolates with resistance to Carbapenems (Imipenem, Meropenem):

ITALIA

2021

16.4%

**APSS - TN
Emocolture**

2022

07.1%

**APSS - TN
Respiratori**

2022

20.5%

**APSS - TN
Urinocolture**

2022

8.8%

Acinetobacter baumannii

Pazienti interni

EMOCOLTURE

ANNO 2022

ARCO

0 Isolati: 0 R CARBA (0.0%)

BORGO

1 Isolati: 0 R CARBA (0.0%)

CAVALESE

0 Isolati: 0 R CARBA (0.0%)

CLES

1 Isolati: 0 R CARBA (0.0%)

ROVERETO

0 Isolati: 0 R CARBA (0.0%)

TIONE

0 Isolati: 0 R CARBA (0.0%)

TRENTO

0 Isolati: 0 R CARBA (0.0%)

Acinetobacter baumannii Pazienti interni M. RESPIRATORI

ANNO 2022

ARCO

1 Isolati: 0 R CARBA (0.0%)

BORGIO

0 Isolati: 0 R CARBA (0.0%)

CAVALESE

0 Isolati: 0 R CARBA (0.0%)

CLES

0 Isolati: 0 R CARBA (0.0%)

ROVERETO

0 Isolati: 0 R CARBA (0.0%)

TIONE

0 Isolati: 0 R CARBA (0.0%)

TRENTO

6 Isolati: 1 R CARBA (16.7%)

Acinetobacter baumannii Pazienti interni URINOCOLTURE

ANNO 2022

ARCO

1 Isolati: 0 R CARBA (0.0%)

BORGO

0 Isolati: 0 R CARBA (0.0%)

CAVALESE

0 Isolati: 0 R CARBA (0.0%)

CLES

0 Isolati: 0 R CARBA (0.0%)

ROVERETO

1 Isolati: 1 R CARBA (100.0%)

TIONE

0 Isolati: 0 R CARBA (0.0%)

TRENTO

1 Isolati: 0 R CARBA (0.0%)

EARS-NET 2021: *Acinetobacter baumannii*
% of invasive isolates with resistance to Fluoroquinolones:

ITALIA

2021

88.1%

**APSS - TN
Emocolture**

2022

00.0%

**APSS - TN
Respiratori**

2022

14.3%

**APSS - TN
Urinocolture**

2022

66.7%

EARS-NET 2021: *Acinetobacter baumannii*
% of invasive isolates with resistance to Aminoglycosides:

ITALIA

2021

85.1%

**APSS - TN
Emocolture**

2022

00.0%

**APSS - TN
Respiratori**

2022

14.3%

**APSS - TN
Urinocolture**

2022

33.3%

EARS-NET 2021: *Acinetobacter baumannii*

% of invasive isolates with resistance to Carbapenems (Imipenem, Meropenem):

ITALIA

2021

86.9%

**APSS - TN
Emocolture**

2022

00.0%

**APSS - TN
Respiratori**

2022

14.3%

**APSS - TN
Urinocolture**

2022

33.3%

Azienda Provinciale per i Servizi Sanitari - Provincia Autonoma di Trento
 Dipartimento Medicina di Laboratorio
 OSSERVATORIO EPIDEMIOLOGICO
 Dettaglio degli Alert generati

Periodo: 17/07/2023 - 27/07/2023

Id Paziente	Id Ricovero	Cognome e Nome		Data di nascita	Sesso	Data ricovero
Id Richiesta	Data accettazione	Data Prelievo	Data Validazione			Reparto
Materiale	Provenienza	Microrganismo			Ente	
0000272122	001-RI-2023-	[REDACTED]		[REDACTED]	M	30930200
51015372	24/07/2023	18:30	24/07/2023	18:30	26/07/2023	14:56
Tamp. rettale		Enterococcus faecium		Rianimazione		
VAN						
R						

Alert Enterococcus faecium Vancomicina Resistente: microrganismo multiresistente
 Applicare precauzioni standard e da contatto.
 Per la gestione del paziente contattare gli operatori addetti al controllo delle infezioni

Azienda Provinciale per i Servizi Sanitari - Provincia Autonoma di Trento
 Dipartimento Medicina di Laboratorio
 OSSERVATORIO EPIDEMIOLOGICO
 Dettaglio degli Alert generati

Periodo: 01/07/2023 - 13/07/2023

Id Paziente	Id Ricovero	Cognome e Nome		Data di nascita	Sesso	Data ricovero														
Id Richiesta	Data accettazione	Data Prelievo	Data Validazione			Reparto														
Materiale	Provenienza	Microrganismo			Ente															
0000332116		[REDACTED]		[REDACTED]	M	30919676														
51004708	07/07/2023	18:00	07/07/2023	18:00	12/07/2023	15:50														
Urina		Klebsiella pneumoniae ssp pneumo		TN-Urologia																
AMC	AMK	ATM	CAZ	CIP	COL	CTX	CXM	CZA	CZI	EIP	FEP	GEN	IPM	KPC	LVX	MEM	SXT	TIG	TOB	
R	R	R	R	R	s	R	R	s	R	R	R	s	R	R	R	R	R	NC	R	
TZP																				
R																				

Alert Resistenza particolare: Microrganismo produttore di Carbapenemasi.
 Resistente a tutti i Betalattamici e Carbapenemici.
 Per la gestione del paziente contattare gli operatori addetti al controllo delle infezioni

ISOLAMENTI MICRORGANISMI ALERT - ROVERETO - GIUGNO 2023

Livello di Analisi Aziendale - Reparto	A. BAUMANNII R CARBAP.	P. AERUGINOSA R CARBAP.	STENOTR. MALTOPHILIA R BACTRIM	ENTEROB. R CEFAL. 3 ^o -4 ^o GEN.	ENTEROB. R CARBAP.	MRSA	MRSA VANCO MIC=2 o R GLICOP	E. FAECALIS VANCO R	E. FAECIUM VANCO R	C. DIFFICILE	LEGIONELLA
ROVERETO Centro antidiabetico											
ROVERETO Cardiologia											
ROVERETO Chirurgia Generale								1			
ROVERETO Chirurgia Vascolare				1							
ROVERETO Servizio Gastroenterologia											
ROVERETO Geriatria				2	1					1	
ROVERETO Medicina Interna Malattie Infettive											
ROVERETO Medicina Interna Alta Intensità						1					
ROVERETO Medicina Interna Media Intensità											1
ROVERETO Neurologia					1						
ROVERETO Ortopedia e Traumatologia											
ROVERETO Ostetricia e Ginecologia											
ROVERETO Otorinolaringoiatria											
ROVERETO Pediatria		1									
ROVERETO Pediatria / Neonatologia											
ROVERETO Medicina d'Urgenza e Pronto Soccorso				5							
ROVERETO Riabilitazione Neurologica											
ROVERETO Anestesia e Rianimazione				2		1					
TOTALE	0	1	0	10	2	2	0	0	1	1	1

ISOLAMENTI DA MATERIALI BIOLOGICI - ESCLUSI I TAMPONI DI SORVEGLIANZA.

STESSO MICRORGANISMO INDIPENDENTEMENTE DAL MATERIALE BIOLOGICO - RICONGEGGIATO SOLO DOPO 30 GIORNI

ISOLAMENTI MICRORGANISMI ALERT - APSS TRENTO - LUGLIO 2023 - TRENTO

Livello di Analisi Aziendale - Reparto	A. BAUMANNII R CARBAP.	P. AERUGINOSA R CARBAP.	STENOTR. MALTOPHILIA R BACTRIM	ENTEROB. R CEFAL. 3°-4° GEN.	ENTEROB. R CARBAP.	MRSA	MRSA VANCO MIC-2 o R GLICOP	E. FAECALIS VANCO R	E. FAECIUM VANCO R	C. DIFFICILE	LEGIONELLA
TRENTO Cardiocirurgia											
TRENTO Cardiologia indirizzo emodinamica											
TRENTO Chirurgia Generale 1											
TRENTO Chirurgia Generale 2				2					1		
TRENTO Chirurgia Pediatrica				1							
TRENTO Chirurgia Plastico-Ricostruttiva											
TRENTO Chirurgia Vascolare											
TRENTO Ematologia											
TRENTO Emodialisi				1							
TRENTO Gastroenterologia Endoscopia Digestiva											
TRENTO Geriatria A (M)											
TRENTO Geriatria B (F)										1	
TRENTO Ginecologia						1					
TRENTO Malattie Infettive				1							
TRENTO Medicina Interna Alta (1A)				1							
TRENTO Medicina Interna Bassa (2B)											1
TRENTO Medicina Interna Media (2A)				1							1
TRENTO Nefrologia		1		3							1
TRENTO Neurochirurgia											
TRENTO Neurologia											
TRENTO Neonatologia e TIN											
TRENTO Oncologia medica				1							
TRENTO Ginecologia Pronto Soccorso											
TRENTO Otorinolaringoiatria				2							
TRENTO Ortopedia e Traumatologia 1A											
TRENTO Ortopedia e Traumatologia 1B											
TRENTO Ostetricia				2							
TRENTO CTO Pronto Soccorso				1							
TRENTO Medicina d'Urgenza e Pronto Soccorso				9						1	2
TRENTO Terapia Intensiva pediatrica											
TRENTO Pediatria											
TRENTO Pediatria Pronto Soccorso				1							
TRENTO Pneumologia		3				1					
TRENTO Psichiatria											
TRENTO Radioterapia Oncologica											
TRENTO Reumatologia											
TRENTO Anestesia e Rianimazione 1		1		2		2					
TRENTO Anestesia e Rianimazione 2				2							
TRENTO Unità Coronarica				1							
TRENTO Urologia				2	1						
TRENTO Villa Rosa - Riabilitazione 1P											
TRENTO Villa Rosa - Riabilitazione 2P				3	1						
TOTALE	0	5	0	36	2	4	0	0	1	2	5

ISOLAMENTI DA MATERIALI BIOLOGICI - ESCLUSI I TAMPONI DI SORVEGLIANZA.

STESSO MICRORGANISMO INDIPENDENTEMENTE DAL MATERIALE BIOLOGICO - RICONTeggiATO SOLO DOPO 30 GIORNI

Escherichia coli

Pazienti interni

URINOCOLTURE

TN - RSA

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
TN-RSA	AMOXI/CLAV	235	74.0						5.5	3.4	50.2	10.2	4.7	0.0	26.0	
TN-RSA	PIPERA/TAZO	235	89.0							24.7	64.3	1.7	5.1	3.8	0.4	
TN-RSA	CEFOTAXIME	235	54.5			9.8	0.0	43.8	0.9	0.4	0.0	0.4	1.3	43.4		
TN-RSA	CEFTAZIDIME	235	60.1		8.1	0.9	0.4	45.1	0.9	4.7	9.8	6.8	12.7	10.6		
TN-RSA	CEFEPIME	235	63.0		10.2	0.0	46.0	0.4	2.1	4.3	5.5	12.3	19.2			
TN-RSA	CEFTAZ/AVIBAC	151	99.3						98.6	0.7	0.0	0.7				
TN-RSA	CEFTOL/TAZOBAC	151	97.4					96.1	1.3	1.3	1.3					
TN-RSA	CIPROFLOXACINA	235	49.7	39.1	0.0	5.1	5.5	2.6	26.0	21.7						
TN-RSA	AMIKACINA	235	94.5					3.4	15.7	14.5	60.9	3.4	2.1			
TN-RSA	GENTAMICINA	235	79.5					22.1	57.4	3.4	4.3	12.8				
TN-RSA	FOSFOMICINA IV	235	94.0									88.5	5.5	1.7	3.4	0.9
TN-RSA	NITROFURANTOINA	235	97.0									33.6	1.7	61.7	3.0	
TN-RSA	TRIMET/SULFA	235	64.7						64.7	0.0	18.7	0.0	16.6			
TN-RSA	ERTAPENEM	235	99.2		96.6	1.3	1.3	0.4	0.4							
TN-RSA	IMIPENEM	235	100.0			34.8	0.9	62.1	1.3	0.9						
TN-RSA	MEROPENEM	235	100.0		63.8	35.3	0.0	0.0	0.9							
TN-RSA	COLISTINA	151	96.7						96.7	0.7	2.6					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Klebsiella pneumoniae

Pazienti interni

URINOCOLTURE

TN - RSA

DISTRIBUZIONE MIC

ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
TN-RSA	AMOXI/CLAV	73	87.7						17.8	2.8	54.8	8.2	4.1	12.3		
TN-RSA	PIPER/TAZO	73	87.7							30.1	57.6	4.1	4.1	0.0	4.1	
TN-RSA	CEFOTAXIME	73	72.6			24.7	0.0	47.9	0.0	0.0	0.0	0.0	1.4	26.0		
TN-RSA	CEFTAZIDIME	73	76.7		16.4	5.5	2.7	48.0	1.4	2.7	1.4	0.0	9.6	12.3		
TN-RSA	CEFEPIME	73	74.0		24.7	0.0	47.9	1.4	0.0	0.0	5.5	20.5				
TN-RSA	CEFTAZ/AVIBAC	41	100.0					100.0								
TN-RSA	CEFTOL/TAZOBAC	41	100.0				100.0									
TN-RSA	CIPROFLOXACINA	73	78.0	58.9	8.2	6.8	4.1	11.0	5.5	5.5						
TN-RSA	AMIKACINA	73	98.6					32.9	2.7	8.2	54.8	1.4				
TN-RSA	GENTAMICINA	73	91.8					39.7	52.1	0.0	4.1	4.1				
TN-RSA	FOSFOMICINA IV	73	74.0									56.2	17.8	5.5	15.0	5.5
TN-RSA	TRIMET/SULFA	73	69.8						69.8	0.0	15.1	0.0	15.1			
TN-RSA	ERTAPENEM	73	98.6		94.5	2.7	1.4	0.0	0.0	0.0	1.4					
TN-RSA	IMIPENEM	73	100.0		39.8	2.7	54.8	2.7								
TN-RSA	MEROPENEM	73	100.0		56.1	42.5	0.0	1.4								
TN-RSA	COLISTINA	41	95.1					95.1	0.0	4.9						
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Pseudomonas aeruginosa Pazienti interni URINOCOLTURE

TN - RSA

DISTRIBUZIONE MIC

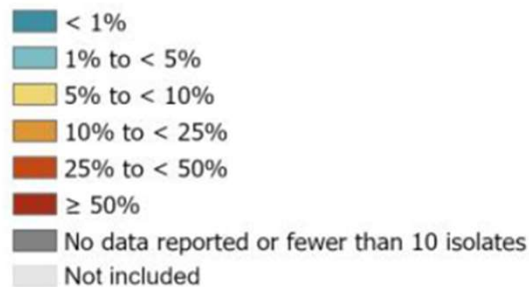
ANNO 2022

EUCAST 2022

2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256
TN-RSA	PIPERAZAZO	75	81.3						1.3	18.6	50.7	10.7	12.0	2.7	4.0	
TN-RSA	CEFTAZIDIME	75	86.7					13.4	61.3	5.3	6.7	5.3	2.7	5.3		
TN-RSA	CEFEPIME	75	88.0				2.7	9.3	49.3	10.7	16.0	10.7	1.3			
TN-RSA	CEFTAZ/AVIBAC	32	100.0					75.0	18.8	6.2						
TN-RSA	CEFTOL/TAZOBAC	32	100.0					90.6	9.4							
TN-RSA	CIPROFLOXACINA	75	89.3	13.3	12.0	49.3	14.7	2.7	5.3	2.7						
TN-RSA	AMIKACINA	75	97.3					5.3	26.6	22.7	32.0	10.7	2.7			
TN-RSA	IMIPENEM	75	96.0			8.0	0.0	37.4	45.3	5.3	1.3	2.7				
TN-RSA	MEROPENEM	75	96.0		14.7	29.3	10.7	41.3	0.0	2.7	1.3					
TN-RSA	COLISTINA	32	90.6						90.6	0.0	9.4					
2022	Antimicrobico	N. Ceppi	% S	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256

Figure 5. *Klebsiella pneumoniae*. Percentage of invasive isolates resistant to carbapenems (imipenem/meropenem), by country, EU/EEA, 2020

ITALY	29.5
FRANCE	0.5
GERMANY	0.5
AUSTRIA	0.9
DENMARK	0.8
SWEDEN	0.3
SPAIN	4.7



Countries not visible in the main map extent

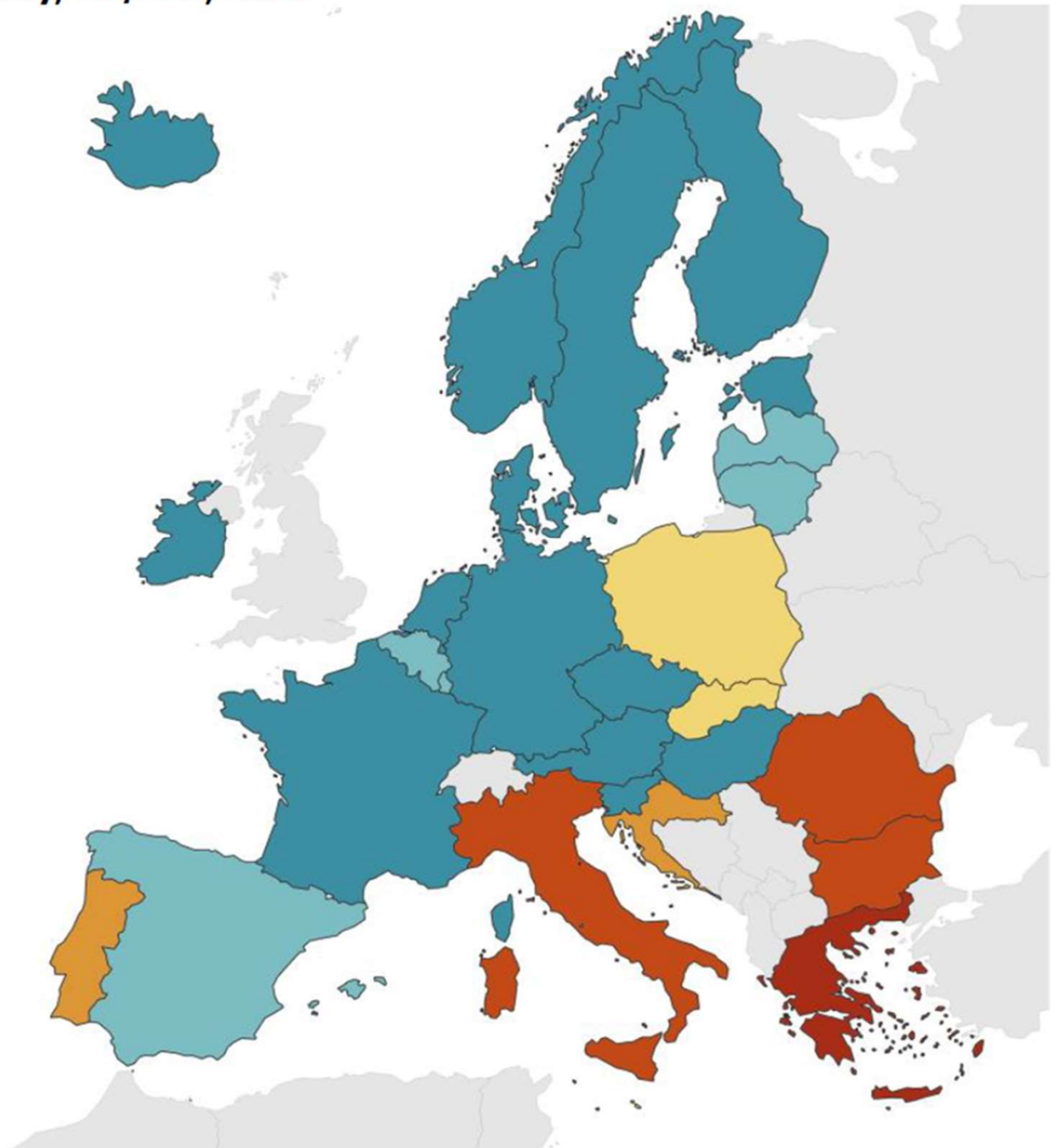
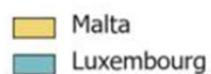
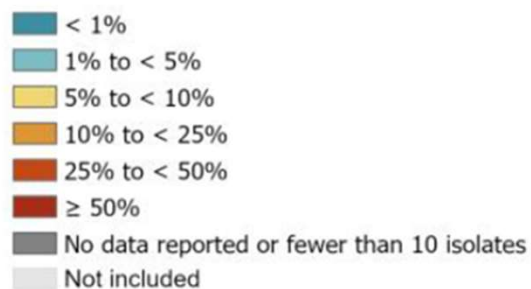
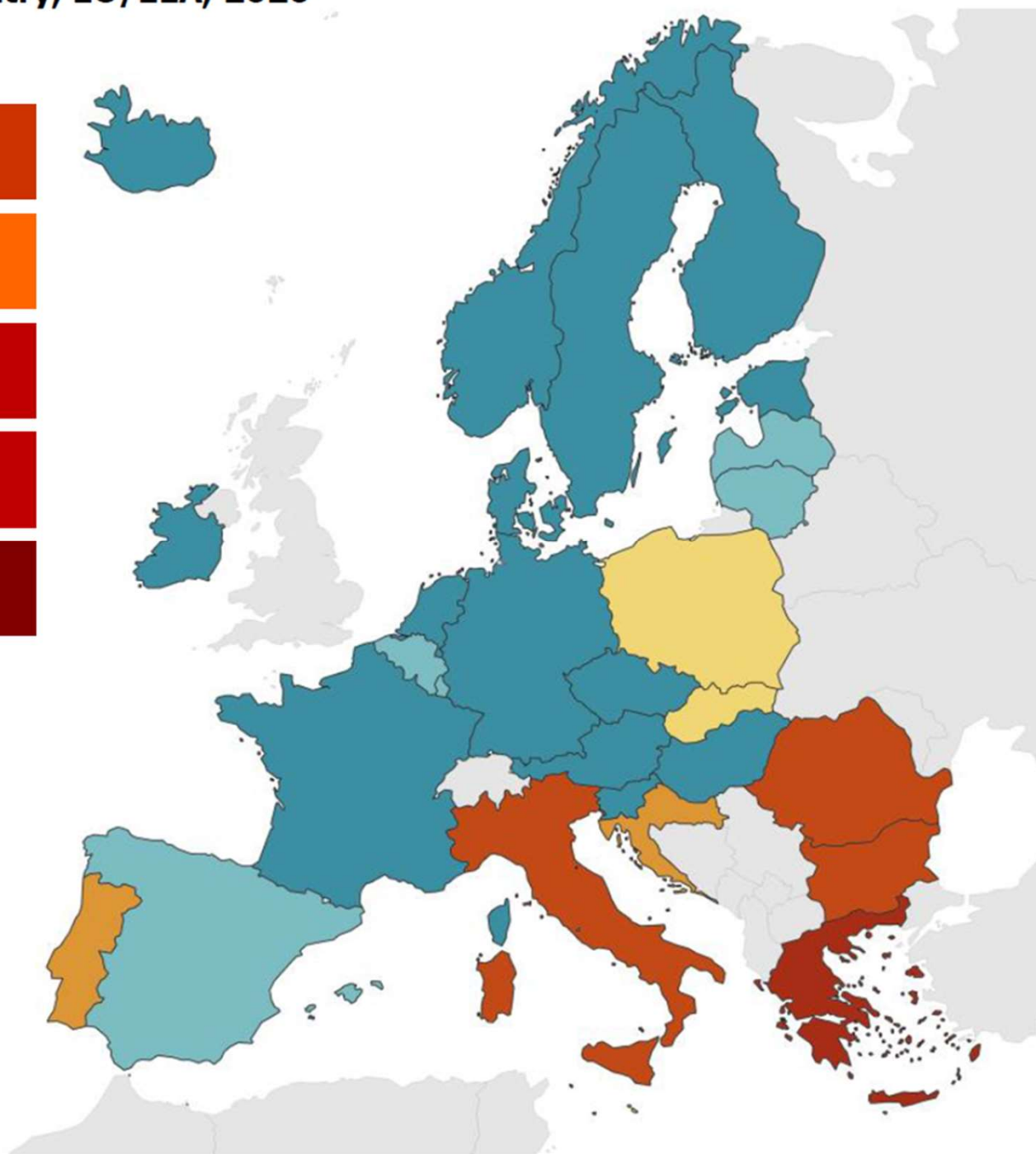
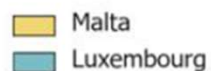


Figure 5. *Klebsiella pneumoniae*. Percentage of invasive isolates resistant to carbapenems (imipenem/meropenem), by country, EU/EEA, 2020

ITALY	2020	29.5
AO XXXX	2018	23,4
AO XXXX	2019	33.0
AO XXXX	2020	49.5
AO XXXX	2021	59.3



Countries not visible in the main map extent



***Klebsiella pneumoniae* – OXA-48 – AO XXXX**

ANNO 2020

1

ANNO 2021

22

ANNO 2022

175

**LA SORVEGLIANZA DELLE RESISTENZE FUNZIONA
MA I DATI EPIDEMIOLOGICI
NON CAMBIONO O PEGGIORANO**

ANTIMICROBIAL STEWARDSHIP

INFECTION CONTROL

FORMAZIONE SPECIFICA

PROCEDURE OPERATIVE





Ordine dei Medici
Chirurghi e Odontoiatri
di Trento



ottobre 2023

ALE

ENZA:
ZIOSA

entino



Foto: Nicola Franceschini

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