

ANTIMICROBIAL STEWARDSHIP IN KOSOVO

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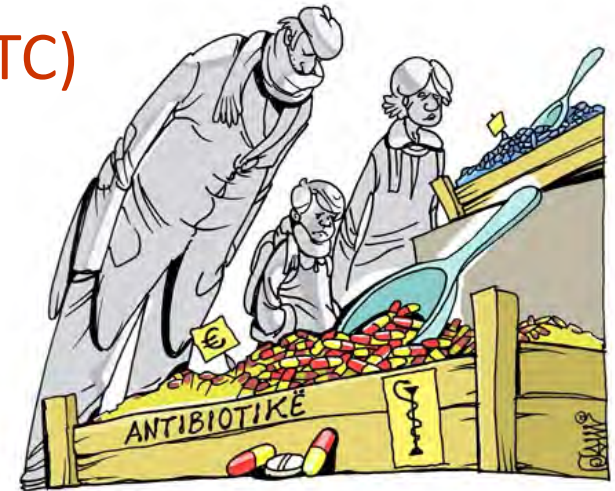
CHALLENGES

Self-medication (OTC)

Budget

Health insurance

Human resources"brain drain"



**Clinical Protocols and
Guidelines**



Pharmaceutical industry

2011

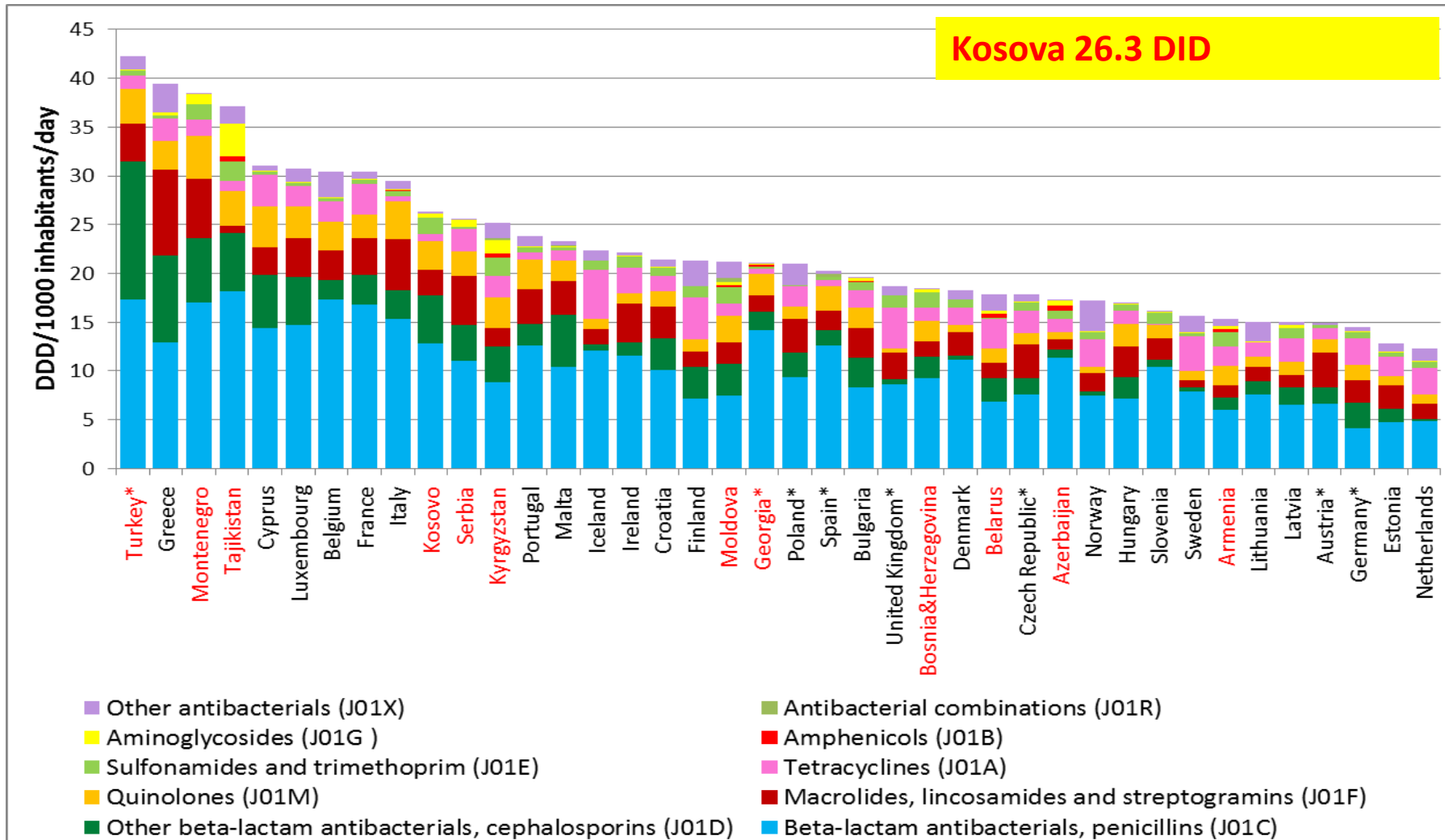
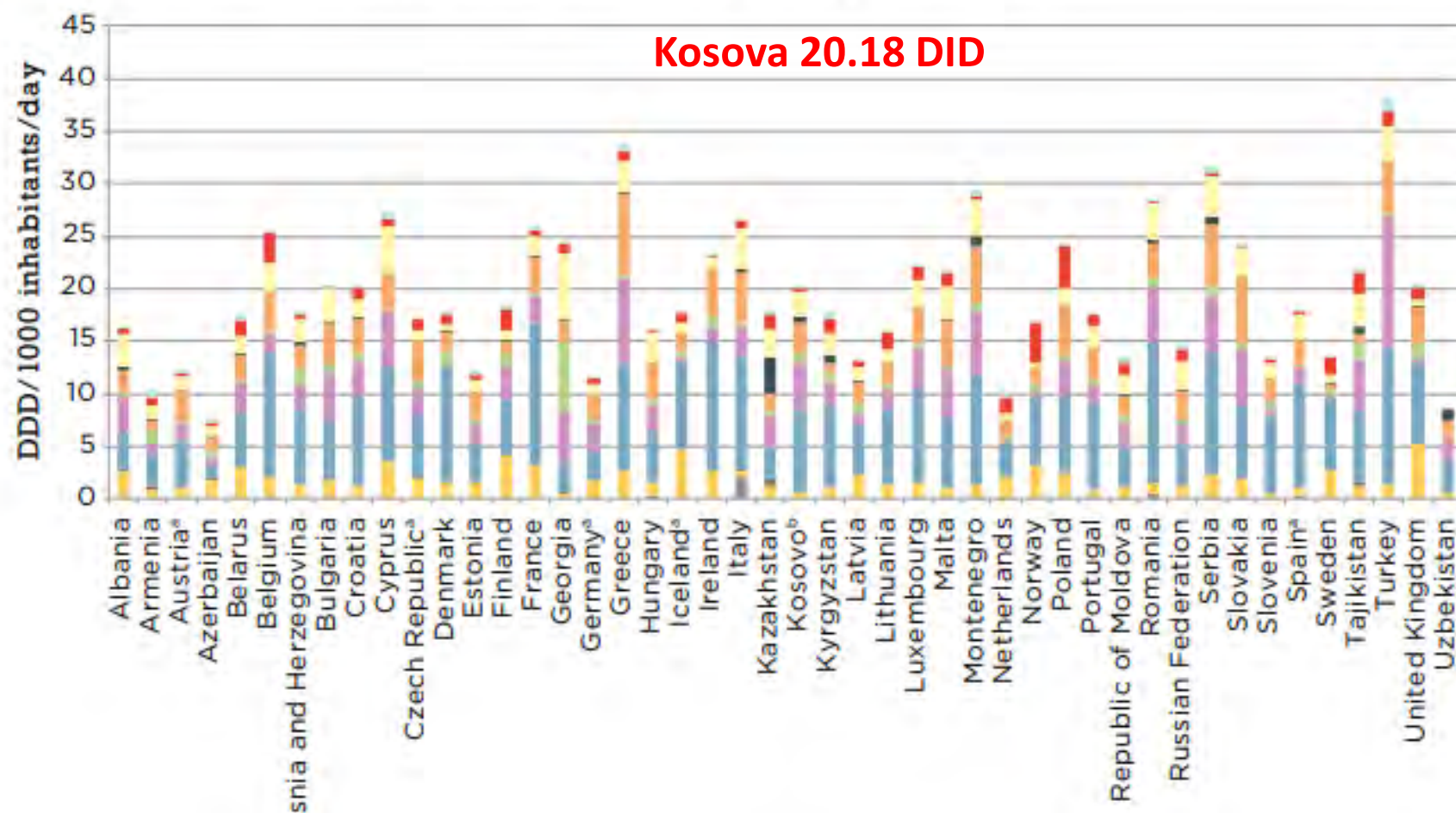


Fig. 4.6 Consumption of antibiotics (DDD per 1000 inhabitants per day) by pharmacological subgroup in 45 countries and Kosovo³ of the European Region, 2015



Driving factors

- the increased awareness of the population and health care workers about AMR
- Media pressure and
- Governmental commitment to address AMR.

Parenteral antibiotic use



European Champions- CEFTRIAXONE

ATC5 code	Antibiotic substance	Kosovo	Belarus	Georgia	Armenia	Monte-negro	Tajikistan	Turkey	Moldova	Serbia	Kyrgyzstan	Bosnia & Herzegovina	Azerbaijan
J01DD04	Ceftriaxone	53,99	45,36	43,97	41,41	40,22	34,02	24,54	21,47	20,76	13,51	11,42	6,07
J01CA01	Ampicillin	0,76	0,00	23,45	4,03	3,01	14,84	0,79	12,41	0,97	28,12	7,54	66,00
J01CR01	Ampicillin and enzyme inhibitor	0,29	2,11	10,45	0,02	0,00	1,94	11,49	0,43	0,12	0,47	0,33	1,96
J01CE01	Benzylpenicillin	1,82	0,18	10,06	13,20	1,11	0,90	0,11	1,40	0,00	3,41	4,17	1,87
J01CR02	Amoxicillin and enzyme inhibitor	0,00	0,26	4,29	0,55	0,13	0,02	0,01	0,82	0,34	0,04	17,70	0,00
J01DC02	Cefuroxime	0,02	0,04	0,87	1,47	0,15	0,02	11,99	2,85	7,54	0,11	0,06	0,16
J01CE30	Comb. of narrow spectrum penicillins	0,00	0,52	0,58	3,63	7,82	3,49	2,84	0,66	6,25	2,13	0,00	13,03
J01DD01	Cefotaxime	0,17	24,81	0,58	0,50	0,00	0,17	0,07	3,81	1,16	0,68	0,32	1,08
J01GB03	Gentamicin	24,47	3,22	0,55	2,42	31,74	3,30	8,44	7,13	41,71	7,71	24,69	1,37
J01DB04	Cefazolin	7,84	3,94	0,21	15,17	0,77	7,03	24,47	21,71	2,26	26,14	12,63	1,01
J01GB04	Kanamycin	0,00	1,43	0,00	1,77	0,00	17,44	0,00	0,00	0,00	4,42	0,00	1,52



Republika e Kosovës
Republika Kosova-Republic of Kosovo
Qeveria-Vlada-Government

Ministria e Shëndetësisë - Ministarstvo Zdravstva - Ministry of Health
Sekretarit i Përgjithshëm/ Generalni Sekretar/ General Secretary

Nr: 36/I/2018
Datë: 23/01/2018

Sekretari i Përgjithshëm i Ministrisë së Shëndetësisë, duke marrë parasysh nenin 38 të Ligjit nr. 03/L-189 për administratën shtetërore të Republikës së Kosovës, (Gazeta Zyrtare, Nr. 82, 21 tetor 2010), bazuar në nenin 17 (paragrafi 5 dhe paragrafi 6) të Rregullores nr. 02/2011 për fushat e përgjegjësisë administrative të Zyrës së Kryeministrit dhe Ministrive (22.03.2011), në pajtim me nenin 5 (paragrafi 5.4. c) të Rregullores 2001/19 për Degën e Ekzekutivit, dhe në zbatim të Strategjisë Sektoriale të Shëndetësisë 2017-2021, nxjerrë:

The One Health Triad



it të veprimit për rezistencën

KOSOVA

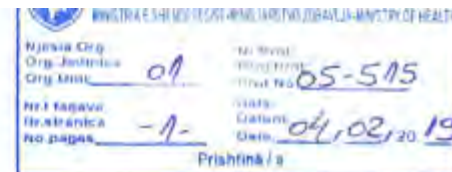
2019-2022

ACTION AREAS

supported by AICS and WHO

1. Governance
2. Information, education and training
3. Surveillance
4. Infection prevention and control
5. Prudent antibiotic use
6. Research
7. International collaboration

- Intersectorial



Ministria e Shëndetësisë - Ministarstvo Zdravstva - Ministry of Health
Zyra e Ministrit/Ured Ministra/Office of the Minister

Nr. 03/19
Datē: 04.02.2019

Ministri i Shëndetësisë, duke marrë parasysh nenin 4, 21, 22 të Ligjit nr. 03/L-189 për administratën shtetërore të Republikës së Kosovës (Gazeta Zyrtare, nr. 82, 21 tetor 2010); duke u bazuar në Nenin 8 (paragraf 1.4) dhe Shtojcën 9 paragrafi ii të Rregullores nr. 02/2011 për fushat e përgjegjësisë administrative të Zyrës së Kryeministrit dhe Ministrive (22.03.2011), bazuar në paragrafin 1.13 të nenit 9 të Ligjit nr. 04 L-125 për shëndetësi, si dhe duke u bazuar në Planin Strategjik për Rezistencën Antimikrobike 2019-2020 i datës 05.12.2018. nxjerr:

VENDIM

1. Themelohet Grupi Ndërsektorial për Kontrollin e Rezistencës Antimikrobike (GNKRA), në përbërje prej:
 1. Lul Raka, IKSHP
 2. Shaip Krasniqi, SHSKUK
 3. Arianit Jakupi, Oda e Farmacistëve të Kosovës
 4. Arsim Kurti, IKSHP
 5. Gazmend Spahija, SHSKUK
 6. Sami Uka, QKMF Prishtinë
 7. Shaban Osmanaj, Inspektorati Farmaceutik
 8. Bekim Zhubi, Agjencia e Veterinës dhe Ushqimit e Kosovës
 9. Afrim Hamidi, Fakulteti i Bujqësisë dhe Veterinës/UP
 10. Filloreta Berisha, Ministria e Mjedisit dhe Planifikimit Hapësinor
 11. Nisret Hajrullahu, Drejtor i Spitalit Rajonal të Gjiçanit

Cornerstone: PRUDENT ANTIBIOTIC USE

FIGURE 4

Health-care facility core elements for AMS programmes in LMICs



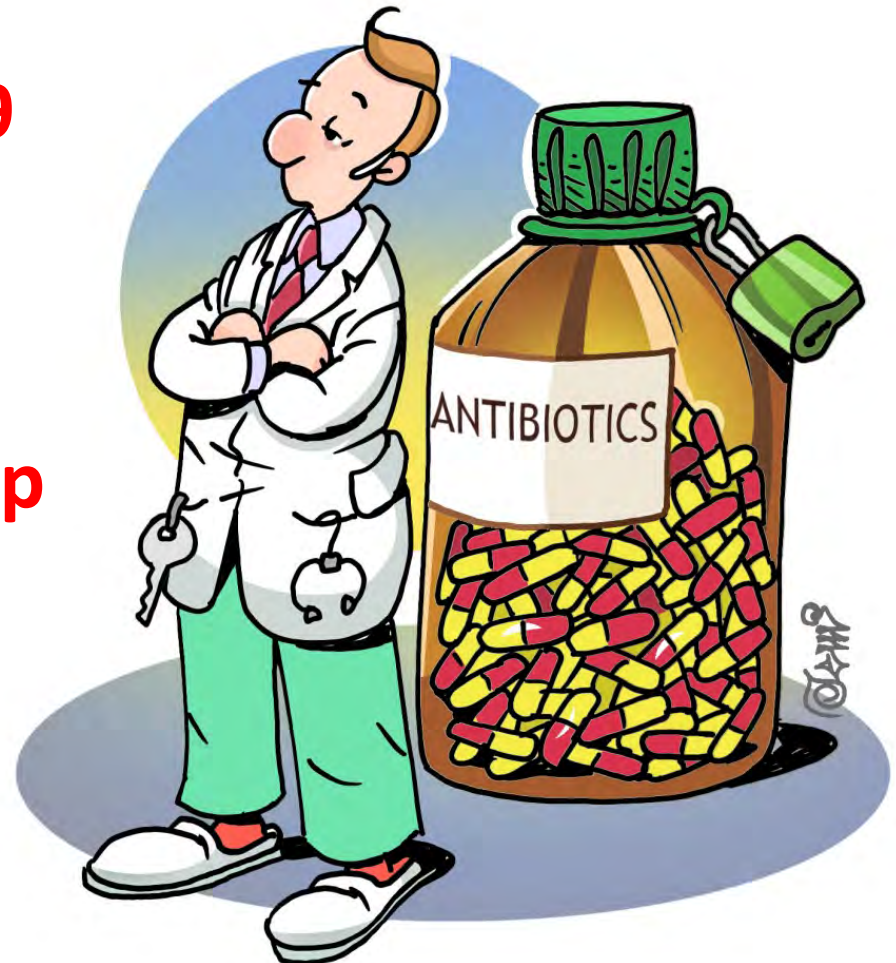
Antimicrobial Stewardship program

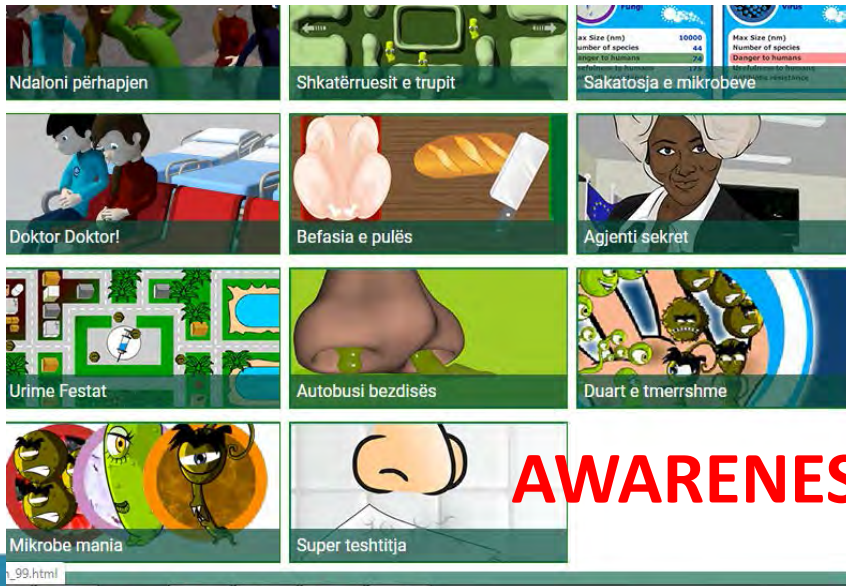
- A team of local experts with consultation and support from the experts of Nancy Hospital (France), prepared the TOR for AMS
- However, due to the COVID-19 pandemic, the implementation of this programme by health institutions has been postponed for 2021.
- **Antibiotic use guidelines in primary care-ongoing**

ESSENTIAL MEDICINE LIST- WHO

AWaRe: Access-Watch-Reserve

- Adopted in Sep 2019
- 69% are Access group





AWARENESS, EDUCATION



E-BUG IN ALBANIAN April 2020



Dosja e Sëmundjeve

Kliko këtu për të parë se sa vdekjeprurëse dhe të neveritshme mund të jenë mikrobet!



Udhëzues për rishikim

Doni të bëheni ekspert për provime? Ky është seksioni për ju!



Lojërat

Ejani, luani lojërat tona dhe argëtohuni!



Laboratory Surveillance of AMR

Executive summary for Kosovo*

How well was your country performing in 2016?

Overall, Kosovo provided data for 100% of the indicators. With an overall **ENLabCap index of 3.6/10** in 2016, data provided by Kosovo indicate a very low capability/capacity level for their public health

ENLabCap country profile

KOSOVO*

Report on 2018 data
Version 1, 22 March 2020

s on antimicrobial
reference laboratories
on and pathogen
n 2012/506/EU.



Executive summary for Kosovo

How well was your country performing in 2018?

Overall, Kosovo provided data for 100% of the indicators. With an overall **ENLabCap index of 4.3/10** in 2018 as compared to **4.0/10** in 2017 (3.6/10 in 2016), data provided by Kosovo indicate a low but gradually increasing capability/capacity level for their public health microbiology system.

set-up and data quality assessment

Level of evidence and scoring of factors affecting the validity of CAESAR data from Kosovo¹ in 2019. More information on the assessment criteria is in Chapter 5 and Annex 2.

Table 7.1 Level of evidence and scoring of factors affecting the validity of CAESAR data from Kosovo¹ in 2019

Level of evidence: B			
Assessment criteria		Score	Factors
Surveillance system	Geographic coverage	+	- The surveillance network comprises two (100% of) laboratories providing blood culture diagnostic services, both of which submitted data. - Laboratories are geographically spread throughout Kosovo¹. - The estimated coverage of the total population (1 800 000)² is 90%.
	Hospital types	+	The network comprises tertiary (14%) and secondary (86%) care hospitals.

RKS vs EU

2-5 higher

EQA from UK



1.2 million € (65% of budget)

INFECTION PREVENTION AND CONTROL

- Stand alone national action plan (signed in 2020)
- Patient safety (EU Regulation) and
- Multimodal strategies WHO

ENVIRONMENT



ARTICLE

<https://doi.org/10.1038/s41467-019-08853-3>

OPEN

Global monitoring of antimicrobial resistance based on metagenomics analyses of urban sewage

Resistant genes in Kosova:

msr(E), blaOXA, dhe aaDa.

Open EUropean prospective cohort study on *Enterobacteriaceae* showing REsistance to CARbapenems (EURECA): a protocol of a European multicentre observational study

RESEARCH AND INTERNATIONAL
COLLABORATION

Belén Gutiérrez-Gutiérrez,¹ Jesús Sojo-Dorado,¹ José Bravo-Ferrer,¹
Nienke Cuperus,² Marlieke de Kraker,³ Tomislav Kostyanov,^{4,5} Lul Raka,⁶
George Daikos,⁷ Jan Feifel,⁸ Laura Folgori,⁹ Alvaro Pascual,¹ Herman Goossens,^{4,5}
Seamus O'Brien,¹⁰ Marc J M Bonten,² Jesús Rodríguez-Baño,¹ and the
project team

Original article

Antibiotic utilization in adult and children patients in Kosovo hospitals

Shaip Krasniqi,¹ Ann Versporten,² Arianit Jakupi,³ Denis Raka,⁴ Armond D
Valon Krasniqi,¹ Zana Deva,⁵ Albiona Rashiti,⁵ Naime Brajshori,⁶ Shefqet
Jetëmira Bytyqi,⁶ Burim Neziri,⁶ Herman Goossens,² Lul Raka,^{5,6}

Infectious Disease Reports 2019; volume 11

Point prevalence survey of healthcare-associated infections and antimicrobial use in Kosovo hospitals

Lul Raka,^{1,2} Gazmend Spahija,³
Agreta Gashi-Gecaj,³ Astrit Hamza,^{2,3}
Edita Haxhiu,¹ Albiona Rashiti,¹
Gëzim Rrahimi,³ Selvete Hyseni,³
Nicola Petrosillo⁴

Kosovo's national action plan for antimicrobial resistance

Lul Raka ✉ • Arsim Kurti • Arianit Jakupi • Shaip Krasniqi • Arbëresha Turjaka

Published: March, 2019 • DOI: [https://doi.org/10.1016/S1473-3099\(19\)30052-0](https://doi.org/10.1016/S1473-3099(19)30052-0)



Together ...



... We Can

