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**MediPIET**  
Mediterranean Programme for  
Intervention Epidemiology Training



CBRN  
**Centres  
of Excellence**  
An initiative of the European Union

# Regional contributions and synergies for Global Health Security

**Abstracts Book**



**27th Nov - 1st Dec 2017  
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## Regional contributions and synergies for **Global Health Security**

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ECDC (European Centre for Prevention and Disease Control), scientific leader of the MediPIET project, chairs the Scientific Committee of the MediPIET ASC 2017.

The MediPIET Project is implemented by the Consortium composed by FIIAPP (the International and Ibero-American Foundation for Administration and Public Policies) and ISCIII (Institute of Public Health Carlos III).



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## Abstract 87

**Hospital prophylactic antimicrobial prescribing: Data from the Global Point Prevalence Survey of Antimicrobial Consumption and Resistance (Global -PPS 2015) in Skopje**

Erjona Shaqiri (4, 5), Sh. Memeti (1), N. Panovski (2), D. Osmani (1), A. Versporten (3), H Goossens (3), G. Boshevska (1), V. Velikj Stefanovska (4, 5), L. Ballazhi (1), Z. Mustafa (1), M. Petrovska

1. The National Institute of Public Health, Skopje, Macedonia. 2. Institute of Microbiology and Parasitology, Faculty of Medicine, University "St. Kiril and Metodij", Skopje, Macedonia. 3. Laboratory of Medical Microbiology, Vaccine and Infectious Diseases Institute (VAXINFECTIO), Faculty of Medicine and Health Science, University of Antwerp, Antwerp, Belgium. 4. Department of Epidemiology and Biostatistics, Medical Faculty, University "St. Kiril and Metodij", Skopje, Macedonia. 5. Mediterranean Programme for Intervention Epidemiology Training (MediPIET)

**Background**

Antimicrobials are widely used in hospitals for both treatment of infections and prophylactic purposes. Point prevalence surveys are a good tool for gathering information regarding antimicrobial use in hospitals and setting targets for improved prescribing. The aim of this study was to analyze hospital prophylactic antimicrobial prescribing and to identify targets for improvements.

**Method**

The standardized and validated protocol of Global PPS for antimicrobial consumption and resistance was used for collecting data from 12 clinics with total 1005 beds in Skopje. The study was conducted from March to August 2015. Data of patients receiving antimicrobials for prophylactic purposes on the day of survey were analyzed.

**Results**

Out of 527 antimicrobials administered on the day of survey, 49.7% (n=262) were applied for prophylactic purposes; 26% (n=68) for medical prophylaxis-MP and 74% (n=194) for surgical prophylaxis-SP. Third-generation of cephalosporins (59.5%, n=156) were the most frequently prescribed antimicrobials for both MP (23.5%, n=16) and SP (72.2%, n=140). Three most used antimicrobials for MP were ciprofloxacin (19.1%), sulfomethoxazole and trimethoprim (17.6%) and amikacin (13.2%). The three most used antimicrobials for SP were ceftriaxone (66.5%), clindamycin (7.7%) and metronidazole (6.7%). The guideline for surgical prophylaxis were mostly missing; only 20.5% of drugs prescribed for medical prophylaxis were based on guidelines. 95.4% (n=185) of antibiotics prescribed for SP were administered for >1 day. The rate of reporting stop/review date for both MP and SP was 100%.

**Conclusions**

The absence of guidelines, prolonged surgical prophylaxis and high use of third-generation cephalosporins for surgical prevention, which can lead to propagation of highly resistance bacteria, were identified targets for intervention.

**KEYWORDS:** Point prevalence survey, antimicrobial consumption, prophylaxis, Macedonia

## Abstract 154

**Antimicrobial Resistance of Klebsiella pneumoniae isolates from surgical hospitals in Kharkiv region, Eastern Ukraine, 2013 - 2016**

Tetyana Chumachenko (1), L. S. Makhota (2), T. O. Karlova (2), S. Yu. Pivnenko (2), T. I. Antusheva

1. Department of Epidemiology, Kharkiv National Medical University, Kharkiv, Ukraine.

2. State Institution Kharkiv Oblast Laboratory Center of the Ministry of Health of Ukraine, Kharkiv, Ukraine

**Background**

Klebsiella pneumoniae (KP) is the important cause of health-care-associated infections. The growth of antibiotic resistance is a severe public health problem. The objective of the study was to research the frequency of isolation of KP strains from surgical hospitals in Kharkiv region, to evaluate antibiotics resistance rate in KP isolates and to assess the changes in the resistance rate in 2013-2016.

**Method**

We examined the results of antibiotic resistance tests of 29 bacteriologic laboratories. The samples were collected from 30 surgical healthcare settings in the Kharkiv region for 2013-2016. 5069 (49.1%) strains of KP were isolated according to CLSI guidelines and tested with disk diffusion method.

**Results**

In the Kharkiv region the frequency of KP isolation in surgical hospitals increased from 3.3% (CI: 2.9; 3.8) in 2013 to 6.7% (CI: 6.0; 7.5) in 2016. KP strains were more often isolated from urine than from wounds and blood. Proportion of KP strains among all isolates were 11.0% in 2013, 10.3% in 2014, 6.2% in 2015, 15.8% in 2016. We found an increase of the percentages of KP resistance to multiple antibiotics from 46.3% in 2013 to 71.7% in 2016. Percentages of resistant isolates to fluoroquinolones raised from 5.6% in 2013 to 12.5% in 2016. 71.6% and 46.7% of KP strains were sensitive to Ceftriaxone (third-generation cephalosporins) in 2013 and 2016 respectively. Percentages of resistant strains to carbapenems ranged from 76.9% (imipenem) and 31.9% (meropenem) in 2013 to 22.7% (imipenem) and 20.0% (meropenem) in 2016.

**Conclusions**

In surgical hospitals of Kharkiv region antibiotic resistance of KP isolates increased in 2013 - 2016. For patient safety it is necessary to implement of effective infection control measures and antibiotic stewardship in hospitals.

**KEYWORDS:** Klebsiella pneumoniae, antibiotic resistance, fluoroquinolones, carbapenems, resistant strain, Ceftriaxone



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**Instituto de Salud Carlos III**  
**Centro Nacional de Epidemiología**  
Monforte de Lemos, 5  
28029 Madrid  
Tel. (+34) 91822 23 74/10  
info@medi Piet.eu

[www.medi Piet.eu](http://www.medi Piet.eu)



**FIIAPP**  
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