



УНИВЕРЗИТЕТ
„ГОЦЕ ДЕЛЧЕВ“
ШТИП

MARKET ANALYSIS OF MOST PRESCRIBED ANTIBIOTICS IN REPUBLIC OF NORTH MACEDONIA

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INTRODUCTION

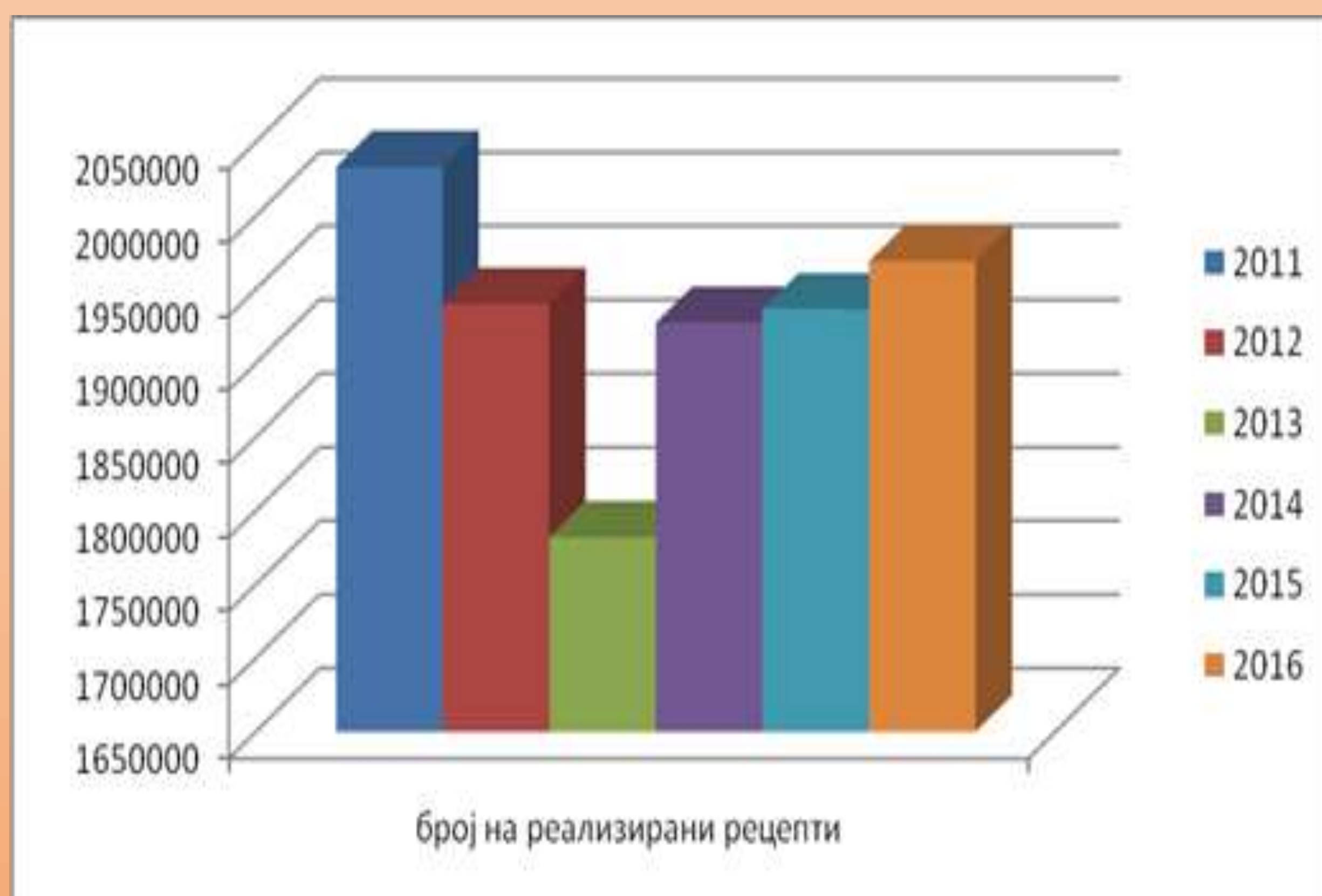
Antibiotic resistance is global concern to public health that lead to unfavorable therapeutic effect, compromises the therapy and also increases the cost of treatment and hospital stay. Monitoring and analysis of consumption of antibiotics is general responsibility of pharmacists that contribute to adaptation of measures and guidelines in order to rationalize the antibiotic use to limit the antibiotic resistance.

METHODOLOGY

The aim of this study is to analyze antibiotic consumption in Republic of North Macedonia in period of 2011-2016. For this purpose, we used relevant data from primary, secondary and tertiary literature, recommendations from Evidence-based Medicine, official data from world and national drug registers and published reports from the HIF of Republic of Macedonia from the Positive List for the period 2011-2016 in order to determine the trends of antibiotic consumption and their effect of increased occurrence of multiresistant bacterial species. Unfortunately, in this analysis antibiotics released without prescription are not included due to lack of evidence data.

RESULTS AND DISCUSSION

Obtained results showed significantly higher stability of antioxidants loaded nanocarriers compared with free drug, enhanced penetration into dermis and potentiation of antioxidant effect. Results are presented on figures below.



Antibiotic	Number of recipes			
	2013	2014	2015	2016
doxycycline	3 455	2 969	2 821	2 644
amoxicillin	193 075	217 196	235 360	234 444
benzathine	66 180	56 898	59 152	41 383
phenoxymethylpenicillin				
amoxicillin + clavulanic acid	476 380	531 317	511 235	544 376
cefalexin	190 322	180 264	180 557	167 975
cefadroxil	49 433	38 853	27 540	25 696
cefuroxime	111 905	125 272	120 487	121 477
cefaclor	62 606	56 280	46 037	45 557
cefixime	53 516	69 101	73 488	84 576
sulfamethoxazole + trimethoprim	31 845	31 127	31 704	31 918
sulfametrole + trimethoprim	37 384	34 373	31 084	26 546
erythromycin	6 671	7 506	7 253	6 230
midecamycin	39 415	37 901	29 950	27 055
clarithromycin	53 170	72 936	93 649	103 929
azithromycin	62 117	99 817	137 802	158 298
clindamycin	26 996	32 212	33 587	35 177
linkomycin	1 174	796	2	
ciprofloxacin	210 974	216 303	205 126	202 130
pefloxacin	5 685	5 393	4 444	3 697
norfloxacin	22 031	22 962	21 222	19 846
pipemidic acid	32 145	33 263	32 542	30 639
Вкупно	1 736 479	1 877 739	1 884 942	1 913 593

CONCLUSION

According to data obtained from HIF, WHO, EMA and EBM, most commonly prescribed antibiotics in Republic of North Macedonia are beta-lactam antibiotics, especially penicillin and cephalosporin derivatives. In conclusion, consumption of antibiotics in Republic of North Macedonia and EU countries is in significant growth that leads to bacterial resistance.