

## Economic analysis of the cost savings after implementation of antibiotic policy in hospital

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**ABSTRACT:** The antibiotic policy is an essential part of the hospital pharmacy activities. It leads to decrease in the microbial resistance, optimisation of the medicine utilisation, and cost savings. The goal of the study is to analyse the results of implementation of antibiotic policy on the medicine utilization and related cost savings in a city hospital in Sofia. The study is a comparative retrospective and prospective analysis of the antibiotic prescribing and cost of therapy, before and after the introduction of the antibiotic policy. There were gathered and systematized 2582 prescriptions for hospitalized patients in 3 hospital departments (surgical, urology, and internal wards). For the evaluation of the most often prescribed combination, the sample was made for 30 patients from each unit. The selection of patients was made at random for the most common diagnoses in the studied wards. The antibiotic utilization was also measured in monetary terms and cost savings were calculated for the period after the antibiotic policy introduction. The comparison of the cost of antibiotic therapy in urology, surgical and internal wards for 2004 and 2005, after the introduction of AB policy showed that in all three studied wards significant savings were realized. Reduction of costs in 2005 compared to 2004 was in total 26 832 BGN (28.48%). Total expenditures on medicines in the studied hospital were 447 810 BGN for 2004 and 396 659 BGN for 2005. Savings of 51 151 BGN were realized, which is a significant value and a significant proportion of the total costs (28.48%). Analysis of the results of the implementation of antibiotic drug policy confirmed that the optimization of drug administration leads to positive economic results. It also confirms the usefulness of measurement of utilization and cost saving, especially in hospital wards with high cost services. The antibiotic policy should be an obligatory part of drug policy in the hospitals with scarce resources. Measuring the impact of antibiotic policy implementation is a useful tool for optimization of the general hospital medicines policy and realization of cost savings. It gives possibility for practical solutions on medicines utilization optimization. Introduction of antibiotic policy in hospitals leads to the reduction of their usage, saves money and improves therapeutic options.