

## Antibiotic Therapy Regimens for Hospital-Acquired Infections: A Comparative pharmacoeconomic Evaluation

Davidyan C. Dennell

**Corresponding author:**  
Davidyan C. Dennell  
email:

[davidyan.dennell@techmed.edu.cx](mailto:davidyan.dennell@techmed.edu.cx)

**Funding information**  
Self-funded

**Conflict of interest**  
None declared by author

### ABSTRACT

The emergence and introduction of new, improved, and usually more expensive drugs into the healthcare system contributes to significant medical advances and, at the same time, to the growth of medical costs. But as advances based on the use of complex technologies increase, the so-called law of "diminishing returns" comes into play. The essence of this law is that each subsequent step in the application of increasingly new achievements of medical science leads to a decrease in the increase in utility in terms of a positive impact on the health of patients and is accompanied by an increase in the final cost of treatment. New drugs improve the quality of care and patient safety, but the return on them on a global scale is often too small compared to their high price. Due to the constant increase in healthcare costs, the interest of the scientific medical community and practicing physicians in the issues of studying the economic efficiency of drug therapy has increased. All over the world, pharmacoeconomic studies have become widely used in the practice of studying the efficiency of newly created drugs. The data from such studies are mandatory for developing formularies at any level - from hospitals to federal programs. Conducting pharmacoeconomic studies allows establishing the cost characteristics of existing approaches to treatment in clinical practice, including drug therapy. In such studies, the cost of medical interventions is assessed and compared, on the one hand, in terms of increasing survival and improving the patient's quality of life, and on the other, with savings on other medical expenses that can be avoided as a result of a new approach. Conducting such studies allows preparing the basis for pharmacoeconomic justification of the need to include a drug in specially recommended standards, protocols and drug formularies. Thus, today the use of pharmacoeconomic methods for assessing various approaches to treating diseases is a technology that allows us to determine the place of certain drugs in the existing variety of recommendations, formularies and treatment standards. The objective of the study to conduct a comparative pharmacoeconomic assessment of the effectiveness of a number of modern beta-lactam antibiotics in moderate intra-abdominal infections and severe hospital pneumonia and to develop criteria for choosing the most optimal drug

**Keywords:** Hospital-Acquired Infections, Antibiotic Therapy, Pharmacoeconomic Evaluation

### Citation:

Davidyan C. Dennell. Antibiotic Therapy Regimens for Hospital-Acquired Infections: A Comparative pharmacoeconomic Evaluation. AJMS 2025; 11 (2): 31-42

To get the Full text article, please contact the editorial board at: [editor@ajms.site](mailto:editor@ajms.site)