

**PHARMAECONOMIC ANALYSIS OF THE EFFECTIVENESS
OF THERAPY WITH HYPOLIPIDEMIC DRUGS
FOR ILLNESS ON ISCHEMIC HEART ILLNESS**

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In the conditions of limited budget financing of the health care and pharmacy system, the low solvency of the population of Ukraine, as well as taking into account the high cost of hypolipidemic drugs used for the treatment of coronary heart disease (CHD), the question of determining organizational and economic directions for increasing the level of effective pharmacotherapy is very acute. CHD.

The purpose of the study is to conduct a pharmacoeconomic analysis of the effectiveness of therapy with hypolipidemic drugs in patients with coronary artery disease. The object of the study was the data of special information sources, which are publicly available on the specified issues.

Modeling is a modern method of research based on the methodology of displaying the situation with insufficient information data to solve the tasks in the form of a scheme that is as close as possible to reality.

We built a "decision tree" based on the data of the randomized study "Statin Therapies for Elevated Lipid Levels compared Across doses to Rosuvastatin". (STELLAR) and self-made calculations of the cost of statin use depending on their dose. According to the data of the STELLAR study, in which 2,431 patients with LDL-C levels between 160 and 250 mg/dL participated, in order to achieve the target levels of LDL-C (in accordance with the recommendation of experts of the National Educational Program on Cholesterol, at the beginning of the study, patients took rosuvastatin, atorvastatin, simvastatin in a dose of 10 mg.

If the patient did not reach the target levels of LDL cholesterol, statin doses were increased by 10 mg. Research lasted 1 year. Probability of getting an effect from treatment using statins in the initial dose and probability of switching to other doses of statins. Calculation of the cost of using statins, taking into account the probability of

switching to other doses in the treatment of patients with coronary artery disease per year:

1. Using medical technology 1.1 (rosuvastatin treatment) to achieve target levels of LDL cholesterol:

$$(0.39 * 9497.30) * 0.18 = 666.71 \text{ UAH}$$

$$(0.61 * 9497.30) * 0.18 = 1042.80 \text{ UAH}$$

2. The amount of costs when applying medical technology 1.1 for patients with coronary artery disease:

$$6,774.40 + 666.71 + 1,042.80 = 8,483.91 \text{ UAH}$$

3. With the use of medical technology 1.2 (with the drug atorvastatin) to achieve the target levels of LDL cholesterol:

$$(0.19 * 4,460.30) * 0.31 = 262.71 \text{ UAH}$$

$$(0.81 * 4,460.30) * 0.31 = 1119.98 \text{ UAH}$$

$$(0.36 * 2,595.15) * 0.81 = 756.74 \text{ UAH}$$

$$(0.64 * 2,595.15) * 0.81 = 1345.32 \text{ UAH}$$

4. The amount of costs when applying medical technology 1.2 for patients with coronary artery disease:

$$2\,325.05 + 262.71 + 1\,119.98 + 756.74 + 1345.32 = 5\,809.80 \text{ UAH}$$

5. With the use of medical technology 1.3 (with the drug simvastatin) to achieve the target levels of LDL cholesterol:

$$(0.24 * 3,282.44) * 0.49 = 385.77 \text{ UAH}$$

$$(0.76 * 3,282.44) * 0.49 = 1\,222.38 \text{ UAH.}$$

Based on the obtained results, it was established that the use of medical technology 1.1 (rosuvastatin) is the least expensive in comparison with medical technologies 1.2 (atorvastatin) and 1.3 (simvastatin). More thorough conclusions regarding the determination of the most effective and rational medical technology for the use of statins in the treatment of patients with coronary artery disease can be made only after conducting all pharmacoeconomic studies.