

COMORBIDITY AND SECONDARY PREVENTION OF CARDIOVASCULAR DISEASES IN OUTPATIENTS: DATA FROM A REGIONAL REGISTRY OF THE REPUBLIC OF UZBEKISTAN

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Cardiovascular diseases (CVDs) are the leading cause of morbidity and premature mortality in Uzbekistan and Central Asia. The high burden is associated with prevalent modifiable risk factors, particularly hypertension, diabetes, dyslipidemia, obesity, smoking, and physical inactivity. By 2050, CVD mortality in Central Asia is projected to reach 676 deaths per 100,000 population, nearly three times the Asian average, with elevated blood pressure and impaired glucose metabolism being major contributors.

In Uzbekistan, CVDs caused approximately 112,000 deaths in 2024, with an age-standardized mortality rate of 523 deaths per 100,000 population. These figures highlight the need to strengthen prevention, early detection, and risk-factor management in primary healthcare, as well as improve outpatient follow-up and evidence-based pharmacotherapy for secondary cardiovascular prevention. To statistically assess comorbidity, major cardiovascular events, and the completeness of evidence-based pharmacological secondary prevention among outpatients using regional registry data.

A retrospective population-based study included 372 patients from a regional electronic outpatient registry. Data were summarized using medians and IQRs for quantitative variables and n, %, and 95% CI for categorical variables. Categorical variables were compared using Pearson’s chi-square test, with $p < 0.05$ considered statistically significant.

Clinical and demographic characteristics of the cohort. The mean age of the study population was 67.6 ± 11.2 years, with a median age of 67.0 years (IQR: 60-75; range: 28-94 years). Men predominated, accounting for 64.2% of the cohort ($n=239$; 95% CI: 59.4-69.1%), while women comprised 35.8% ($n=133$; 95% CI: 31.0-40.8%). Prevalence of cardiovascular and cerebrovascular diseases. Arterial hypertension was identified in 69.1% of patients ($n=257$; 95% CI: 64.4-73.8%), and coronary artery disease (CAD) was present in 63.4% ($n=236$; 95% CI: 58.5-68.3%). A history of stroke was documented in 33.6% of patients ($n=125$; 95% CI: 28.8-38.4%). Ischemic stroke was reported in 27.7% ($n=103$; 95% CI: 23.1-32.2%), whereas hemorrhagic stroke occurred in 4.6% ($n=17$; 95% CI: 2.4–6.7%). A history of both ischemic and hemorrhagic stroke was identified in 1.3% of patients ($n=5$; 95% CI: 0.2-2.5%). Transient ischemic attacks (TIA) were recorded in 11.3% of the cohort ($n=42$; 95% CI: 8.1-14.5%). Secondary preventive pharmacotherapy. Analysis of secondary prevention strategies demonstrated that statin use was significantly more frequent among patients with a history of stroke compared with those without prior cerebrovascular events ($p=0.008$). Nevertheless, the overall level of statin utilization remained suboptimal, indicating insufficient implementation of evidence-based secondary prevention measures.

In this Uzbekistani outpatient cohort, 33.6% of patients with CVD had a history of stroke (95% CI: 28.8–38.4%), indicating a substantial burden of combined cardiovascular and cerebrovascular disease. These findings emphasize the need for comprehensive secondary prevention, including effective control of blood pressure, lipid and glucose metabolism, smoking cessation, and adherence to guideline-directed therapy.