



## EFFECTIVE MODELS OF HEALTHCARE FINANCING

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**Abstract:** This article provides comprehensive analysis of various models of healthcare financing and their effectiveness based on empirical data from 2023-2024.

### Русский язык:

**Аннотация:** В данной статье проведен комплексный анализ различных моделей финансирования здравоохранения и их эффективности на основе эмпирических данных 2023-2024 годов.

**Annotatsiya:** Ushbu maqolada sog'lijni saqlash xizmatlarini moliyalashtirishning turli modellari va ularning samaradorligi 2023-2024 yillar empirik ma'lumotlari asosida kompleks tahlil qilingan.

**Keywords:** healthcare financing, health insurance, Beveridge model, Bismarck model, universal coverage, health service pricing, government budget, private financing, health economics, healthcare reforms

**Ключевые слова:** финансирование здравоохранения, медицинское страхование, модель Бевериджа, модель Бисмарка, всеобщий охват, ценообразование медицинских услуг, государственный бюджет, частное финансирование, экономика здравоохранения, реформы здравоохранения

**Kalit so'zlar:** sog'lijni saqlash moliyalashtirish, tibbiy sug'urta, Beverij modeli, Bismark modeli, universal qamrov, tibbiy xizmatlar narxlanishi, davlat byudjeti, xususiy moliyalashtirish, tibbiyot iqtisodiyoti, sog'lijni saqlash islohotlari

The question of how to finance healthcare services has become one of the central issues in state policy worldwide in the modern era. Human health and quality of life represent the primary indicators of state development, as a healthy population serves as the guarantee of economic growth, social stability, and national security. However, countries employ different approaches to healthcare financing, and each of these approaches possesses its own advantages and disadvantages. According to World Health Organization (WHO) data, in 2023 globally 9.8 trillion USD was spent on healthcare, representing 10.8% of world gross domestic product. The efficient allocation and utilization of these enormous resources holds strategic importance for



all countries.

The primary objectives of healthcare financing consist of ensuring quality and affordable medical services for the population, implementing universal coverage, guaranteeing financial protection, and maintaining system sustainability. Universal coverage means that all segments of the population, regardless of their ability to pay, have access to essential medical services. Financial protection refers to mechanisms protecting families from falling into poverty due to medical expenses. According to WHO data, annually over 100 million people face excessive financial burden due to medical expenses and more than 2 billion people encounter financial difficulties due to out-of-pocket payments.

From a historical perspective, various models of healthcare financing were formed during the 20th century. The first scientifically based system was the social health insurance system introduced in Germany in 1883 by Chancellor Otto von Bismarck, which was based on contributions from workers and employers. Subsequently, in 1948 the National Health Service (NHS) was created in the United Kingdom, developed by William Beveridge and implemented by Clement Attlee's government, envisioning a system of universal medical care financed from the government budget and free for the entire population.

The United States developed a market approach based primarily on private health insurance, although government programs for the elderly (Medicare) and the underprivileged (Medicaid) were introduced in 1965. In Asian countries, unique hybrid models developed, such as mandatory medical savings accounts (Medisave) in Singapore, universal social insurance in Japan, and the national health insurance system in South Korea.

**Table 1. Main Models of Healthcare Financing: Comparative Analysis (2023 data)**

Model / Characteristic	Beveridge Model (Government Budget)	Bismarck Model (Social Insurance)	Market Model (Private)	Hybrid Models
<b>Main Countries</b>	United Kingdom, Italy, Spain, Portugal,	Germany, France, Japan, Belgium, Austria,	USA (primary), Switzerland (partial)	Singapore, Australia, Israel, China



	Scandinavia (partial), Canada	Netherlands, South Korea		
<b>Financing Source</b>	Government budget (taxes: income, VAT, corporate)	Mandatory insurance contributions (workers 3-8%, employers 6-12%)	Private insurance premiums, out-of-pocket payments	Mixed: budget + insurance + private + savings
<b>Coverage (% population)</b>	Universal: 99-100%	Universal: 99-100% (mandatory by law)	Partial: 85-92% (voluntary)	95-99% (through various mechanisms)
<b>Service Providers</b>	Primarily state (70-90%), private sector limited	Mixed: state 40-60%, private 40-60%, free choice	Primarily private (80-95%), minimal state	Various: state, private, NGOs, high competition
<b>Out-of-pocket Share</b>	Low: 10-18%	Moderate: 12-22%	High: 35-50% (uninsured)	Moderate: 15-28%
<b>Per Capita Expenditure (USD)</b>	3,200-4,800 (average 4,100)	4,500-6,200 (average 5,400)	11,000-13,000 (USA 12,555)	2,800-5,600 (Singapore 2,989)

This table presents a comprehensive comparison of four main models of healthcare financing. While the Beveridge model achieves the highest indicators for universal coverage and equity (8.9/10), it suffers from slow implementation of innovations and long waiting times. In the UK's NHS system in 2023, the average wait for scheduled surgery was 18 weeks, with some cases exceeding 6 months. However, per capita expenditure is relatively low (average \$4,100) and medical bankruptcy cases are virtually absent, demonstrating the system's strong social protection function.

The Bismarck model manifests as the most balanced approach across multiple indicators. Countries such as Germany, France, and Japan achieve high life expectancy



(Japan 84.5 years - highest in the world), low infant mortality (Japan 1.8 - lowest), and universal coverage while spending 10.5-12.5% of GDP on healthcare. Financing through social insurance contributions ensures stable funding flows and reduces direct budget burden. Competition between public and private service providers enhances quality and efficiency. However, demographic aging poses a serious threat to these systems - in Germany, the share of population over 65 years is 22% and this indicator is projected to reach 28% by 2040, disrupting the ratio between contributors and beneficiaries.

The US market model leads the world in innovation and technology (45% of global medical research investment), yet faces serious problems regarding equity and efficiency. Per capita expenditure of \$12,555 is 2-3 times higher than other developed countries, yet life expectancy (78.9 years) is below the OECD average and infant mortality (5.4) is high. As of 2023, 27 million people in the USA (8% of population) remain uninsured and medical expenses constitute 66% of personal bankruptcies. This inequality creates economic inefficiency - many patients cannot access preventive care and are forced to use expensive emergency services when problems are delayed.

Hybrid models, particularly Singapore's system, have achieved remarkable results in economic efficiency. Singapore spends only 4.7% of GDP on healthcare while achieving 85.1 years life expectancy and 1.6 infant mortality. Singapore's system has three main components: Medisave (mandatory medical savings accounts - 8-10.5% of wage fund), Medishield (insurance for catastrophic illnesses), and Medifund (government assistance for the underprivileged). This system combines personal responsibility with budget constraints, ensures price transparency, and reduces overutilization problems. However, this model is applicable to a small, wealthy, and manageable state and cannot be directly copied to large, heterogeneous countries.

Uzbekistan began phased implementation of the mandatory health insurance (MHI) system from 2021. Presidential Decree PQ-4890 (December 1, 2020) "On Measures to Implement the Mandatory Health Insurance System" created the legal foundation for the MHI system. Initially launched in 2021 as a pilot project in Tashkent city and Tashkent region, the system began application in all territories from 2023. The system is based on the Bismarck model - workers and employers pay contributions from the wage fund (total 3%), these funds are collected by the Mandatory Health Insurance Fund and used to finance medical services.

As of 2024, total healthcare expenditure in Uzbekistan was 52.7 trillion UZS or 4.7 billion USD, representing 5.8% of GDP. The structure of financing sources is: government budget 62.4% (32.9 trillion UZS), mandatory health insurance 23.7%



(12.5 trillion UZS), private payments 13.9% (7.3 trillion UZS). Per capita healthcare expenditure is \$138, close to the Central Asian average (\$167) but significantly below the OECD average (\$4,986). Implementation of the MHI system has led to some positive results: insurance coverage increased from 18% in 2021 to 67% in 2024, the share of out-of-pocket payments decreased from 24.3% to 13.9%, the medicine compensation program expanded (235 types of medicines compensated), and preventive examination coverage increased from 48% to 71%.

However, Uzbekistan's system faces several serious problems. First, limited coverage - workers in the informal sector (32% of working-age population), private farm workers in agriculture, and a large portion of self-employed remain uninsured. Second, contribution collection problems - in 2024 only 78.4% of planned contributions were collected, weakening the fund's financial sustainability. Third, limited service package - MHI covers only basic outpatient and inpatient services; many high-tech operations and expensive medicines are not covered. Fourth, underdeveloped network of medical facilities - insufficient medicine supply, diagnostic equipment, and qualified personnel hinder the system's effective operation. Fifth, weakness of information systems - electronic health systems are implemented in only 42% of facilities, data exchange is limited, and fraud risks are high.

Based on international experience analysis and considering Uzbekistan's conditions, the following strategic directions are recommended. First, developing mechanisms for insuring informal sector workers to achieve full universal coverage - this can be implemented through income-proportionate contributions, government subsidies (for low-income earners), and simplified registration. Second, phased expansion of the service package - initially adding services with high demand and impact indicators (such as oncological treatment, cardiac operations, dialysis), then gradually transitioning to a complete package.

Third, targeted investments for modernizing medical infrastructure - modern diagnostic equipment, electronic medicine systems, personnel qualification improvement programs. Fourth, expanding freedom of choice among service providers to increase competition and efficiency, implementing quality indicator-based payment systems, and increasing private sector participation. Fifth, improving contribution collection efficiency to ensure financial sustainability, properly directing government budget subsidies, and optimizing expenditures (generic medicines, expanding outpatient medicine, preventive focus).

In conclusion, selecting an effective model for healthcare financing depends on each country's specific context. There is no universally "best" model; rather, each approach



represents a combination of advantages and disadvantages. For Uzbekistan, the social insurance-based Bismarck model adapted to local conditions appears most appropriate, as it enables universal coverage, creates financial sustainability, and improves service quality. However, this model's success depends on full implementation, legislative framework perfection, institutional capacity, comprehensive reforms, and continuous monitoring and evaluation. By observing Uzbekistan's MHI system development in coming years and learning from international experience, it is possible to create an effective and sustainable healthcare system meeting the population's needs.

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