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ANALYSIS OF OUTCOME-BASED HEALTHCARE FINANCING MODELS BASED ON INTERNATIONAL EXPERIENCE

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Abstract
This article analyzes value- and outcome-based healthcare financing models using the examples of Sweden, Germany, Austria, and South Korea. It emphasizes the role of PREMs and PROMs indicators in evaluating the performance of medical institutions and staff. The paper also discusses the feasibility of implementing such models in Uzbekistan, along with the required infrastructural prerequisites.

Keywords: Outcome-based financing, PREMs, PROMs, quality of medical services, international experience.

Introduction

Efficient use of limited resources in the healthcare system and improving the quality of medical care provided to the population are among the key priorities. Traditionally, hospitals and healthcare institutions have been funded based on the resources used or per capita allocations. However, in such an approach, healthcare providers are incentivized not for delivering high-quality and outcome-oriented services, but rather for the volume of services and the absorption of pre-allocated funds in the budget.

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Therefore, in recent years, many countries have started adopting principles of outcome- and value-based healthcare. According to these principles, funding to medical institutions and staff is allocated based on their performance, improvements in patients' health, and the quality of services. As a result, the efficiency of budget expenditures increases, since funds are directed toward truly beneficial services.

This article explores the experiences of Sweden, Germany, Austria, and South Korea in implementing outcome- and value-based healthcare financing models and examines the practical aspects of compensating healthcare workers based on achieved outcomes. It also discusses the prospects and challenges of applying these models in Uzbekistan.

Theoretical foundations of outcome- and value-based healthcare financing

Outcome-based healthcare financing refers to linking financial resources to specific measurable improvements in patients' health. Medical institutions receive additional funding or cost compensation if they meet predefined indicators or if there is a measurable improvement in patient health.

The essence of value-based healthcare lies in financing medical services not based on the volume of services provided but on the actual outcomes—improvement in patients' health, prevention of chronic diseases, and promotion of healthy lifestyles among the population. The effectiveness of these services is evaluated by comparing health outcomes to the costs incurred[1].

Thus, outcome-based financing is a key instrument in implementing value-based healthcare, where financial incentives are tied to results, ultimately increasing healthcare value.

INTERNATIONAL EXPERIENCE

Sweden

Sweden is recognized as one of the leading countries in implementing outcome- and value-based healthcare, having maintained disease registries and quality

[1] JOUR. What Is Value-Based Healthcare? 2017/02/05. doi: 10.1056/CAT.17.0558. Catalyst Carryover. Massachusetts Medical Society. https://catalyst.nejm.org/doi/abs/10.1056/CAT.17.0558. Accessed on 2025/06/26

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indicator databases for over 20 years[2]. These systems enable continuous monitoring and evaluation of healthcare outcomes.

Due to Sweden's decentralized healthcare system, 21 regional health authorities independently manage medical services and financing mechanisms. This decentralization allows for piloting new initiatives in small regions and, based on successful results, scaling them nationally. In some of these regions, outcome-based payment models have been tested.

For example, in Stockholm County, for knee and hip replacement surgeries, a portion of the payment (3.2%) is made only after predefined outcomes are achieved. This policy increased hospitals' interest in improving surgical quality and patient outcomes. Between 2009 and 2011, the rate of complications and the need for repeat surgeries declined by approximately 20% compared to control groups not using this model. Moreover, total costs per patient decreased, demonstrating that service quality improved without increasing expenditures[3]. In 2013, this model was extended to spinal surgeries with a 10% performance-based payment. Encouraged by positive results, the model was gradually introduced in other Swedish regions.

Sweden's experience shows that introducing clear, measurable indicators and using them for financing significantly improves the quality of healthcare services.

Germany

Germany's healthcare system is funded primarily through mandatory health insurance with multiple independent funds[4]. Since 2004, Germany has implemented the DRG (Diagnosis-Related Groups) system for inpatient

[2] Andrea Chipman. The Economist Intelligence Unit. January 2019. VALUE-BASED HEALTHCARE IN SWEDEN Reaching the next level. https://impact.econ-asia.com/perspectives/sites/default/files/value-basedhealthcareinswedenreachingthenextlevel.pdf (page 6)

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[4] International Health Care System Profiles Germany. *By Miriam Blümel and Reinhard Busse, Department of Health Care Management, Technische Universität Berlin*
https://www.commonwealthfund.org/international-health-policy-center/countries/germany

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hospitals[5]. This system assigns average tariffs to each diagnosis, significantly reducing average hospital stays—from 9.7 days in 2000 to 7.2 days by 2023[6].

While Germany has not broadly implemented outcome-based incentives for healthcare workers, reforms have been introduced in recent years. Since 2016, a bonus-malus system was proposed as an addition to the DRG system. This system allows quality-based performance contracts between insurance funds and hospitals[7]. High performance can lead to additional funding. For example, general practitioners receive annual bonuses for enrolling patients with chronic diseases (in 2016, €120 per patient)[8].

Thus, Germany has started focusing not only on service volume but also on quality-based incentives, although achieving substantial results requires time and consistency.

Austria

Austria implemented a DRG-based hospital financing model in 1997[9]. Later, reforms in 2013 and 2017 aimed to control rising healthcare costs, which were growing faster than GDP. A national cap was introduced to limit public healthcare spending[10].

Austria also sought to balance inpatient and outpatient care and prioritized preventive measures. As a result, performance-based contracts between hospitals and insurance funds emerged, with commitments to specific outcome indicators. Over the past decade, Austria has increasingly emphasized administrative control to improve efficiency. However, there is now a growing interest in shifting toward financing based on results and value indicators.

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South Korea

South Korea's national health insurance system operates with a single payer model. Throughout the 2010s, the country developed a robust evaluation and incentive mechanism to improve healthcare quality. In 2000, legislation introduced performance-based funding mechanisms for healthcare institutions.

In 2007, the Value Incentive Program (VIP) was launched, initially targeting heart attacks and cesarean section indicators[11]. The program helped improve service quality, and between 2008–2010, 8.57 billion won was allocated to hospitals as incentives[12]. Due to its success, the program was expanded to include general and even primary healthcare institutions from 2011 onward[13].

Additionally, evaluation results for all hospitals are made public in Korea. This transparency fosters competition among institutions. Data collected by the government and insurance funds are analyzed to continually reform the financing system.

Korea's experience proves that with a well-designed, data-driven, outcome-based financing model, rapid improvements in healthcare quality and efficiency are achievable. Moreover, patient satisfaction is considered essential. The insurance fund regularly conducts patient surveys to evaluate care quality.

IMPLEMENTATION OF PREMs AND PROMs INDICATORS IN STAFF EVALUATION

Traditionally, the evaluation and incentive mechanisms for healthcare workers are based on factors like work experience and professional category. However, with reforms focused on efficiency, it is now essential to consider performance-based indicators when assessing medical staff.

Such indicators include complication rates after treatment, patient satisfaction levels, adherence to preventive measures, and compliance with medical

[11] Kim, Sun & Jang, Won & Ahn, Hyun & Park, Hyang & Ahn, Hye. (2012). Korean National Health Insurance Value Incentive Program: Achievements and Future Directions. Journal of preventive medicine and public health = Yebang Ŭihakhoe chi. 45. 148-55. 10.3961/jpmph.2012.45.3.148.

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protocols. Correctly selected target indicators shift the attention of healthcare providers toward improving patient health and service quality.

These indicators can be categorized as follows:

- **Clinical outcome indicators** (e.g., reduction in infant mortality, blood sugar control),
- **Process indicators** (e.g., treatments in line with protocols, full diagnostics, vaccination coverage),
- **Efficiency indicators** (e.g., reducing average cost per patient),
- **Patient-reported indicators** such as PREMs and PROMs.

PROMs (Patient-Reported Outcome Measures) are assessments made by the patients themselves, reporting how their health has improved after medical intervention.

PREMs (Patient-Reported Experience Measures) reflect how satisfied patients are with the services received. These indicators are typically gathered through structured surveys.

However, using PREMs and PROMs presents certain challenges:

- Collecting and analyzing such data requires time and resources.
- Standardized data collection is essential to ensure comparability across institutions.
- Severely ill patients may rate outcomes lower due to their condition, requiring statistical adjustments.

Despite these complexities, PREMs and PROMs are considered core elements of value-based healthcare financing by experts such as Dana Safran[14].

UZBEKISTAN – PROSPECTS AND CONCLUSIONS

The international practices reviewed provide valuable insights for enhancing ongoing reforms in Uzbekistan's healthcare system. Currently, except for a few regions, hospitals are financed through outdated budgeting methods—based on bed capacity or per capita tariffs.

Modern global practice emphasizes gradual transition to performance-based and value-based systems. For this, digital transformation and reliable data systems

[14] Bringing PREMs and PROMs Into Value-Based Care. David Raths. 28.09.2024 https://www.hcinnovationgroup.com/population-health-management/patient-engagement/article/55140766/bringing-prems-and-proms-into-value-based-care

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are critical. As shown in Sweden, disease registries and quality monitoring systems are essential.

Uzbekistan has already begun digitizing the healthcare system. It is vital to complement this with performance indicators for staff and institutions. These indicators must be clear, fair, and achievable. Involving doctors and specialists in the development of these indicators is also crucial.

Incorporating patient feedback through PREMs and PROMs into the evaluation process will help improve service quality. Patient opinions must be integral in assessing healthcare workers and institutions. Therefore, establishing a broad system to collect patient satisfaction data is essential.

Introducing PREMs and PROMs today will build a foundation for later linking performance to financial incentives as experience grows.

Transitioning to an outcome-based system requires not just technical tools but also mindset shifts among healthcare workers. All staff should be informed and engaged in this change, with responsibility for results shared across teams.

Successful practices and staff should be encouraged, while underperforming facilities should be supported and improved.

Uzbekistan has already taken the first steps. The Ministry of Health has announced its intention to introduce performance-based evaluation for medical associations and centers. This is a promising move, but consistent follow-through is critical.

Conclusion

Outcome-based and performance-based healthcare financing has proven effective globally for ensuring efficient use of budget resources and improving service quality. These models focus on measurable health improvements rather than service volume.

Target indicators and tools like PREMs and PROMs help set clear goals and assess service delivery from the patient's perspective. Introducing such tools in Uzbekistan in a phased manner will support integration of patient feedback into staff evaluation.

Ultimately, adopting these models contributes directly to better allocation of healthcare budgets. Uzbekistan's centralized system offers a strategic advantage

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for piloting and scaling reforms. The rapid pace of digitization further supports this transition.

Introducing outcome-based financing is not just an economic reform—it is an investment in public well-being. With proper implementation, it will improve funding efficiency, fairly reward healthcare staff, and enhance the overall quality of medical services.

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