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MANAGING INCENTIVE PAYMENTS IN PRIMARY HEALTH CARE: BUSINESS SOLUTIONS FOR SUSTAINABLE HEALTHCARE DEVELOPMENT

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Abstract. This study examines incentive payment schemes in primary care and their impact on healthcare effectiveness and equity. We analyze four principal remuneration models: Fee-for-Service, Capitation Financing, Pay-for-Performance (P4P), and hybrid approaches.

Kazakhstan introduced capitation financing with P4P elements in 2009. Our analysis identifies three fundamental paradoxes in this system. First, weak risk-adjustment mechanisms chronically underfund facilities serving vulnerable populations. Second, payment delays undermine financing predictability and create financial instability. Third, incentives for selective patient enrollment contradict universal health coverage goals. The P4P component shows additional weaknesses: questionable quality indicators, inadequate outcome attribution, and poor integration across care levels.

Based on international experience (Kyrgyzstan, Uzbekistan, United States), we propose four optimization strategies: strengthening risk-adjustment models; refining P4P mechanisms with emphasis on equity and provider support; eliminating payment delays; and developing comprehensive motivation frameworks that combine adequate base salaries and fair capitation rates with non-financial incentives such as professional development and improved working conditions.

Our findings show that financial mechanisms without broader systemic support generate counterproductive incentives. These results inform remuneration policy development, primary care quality improvement, and healthcare expenditure optimization.

Keywords: Primary Health Care (PHC), incentive payments, pay-for-performance, capitation financing, health sector reform, motivation of healthcare workers.

Біріншілік денсаулық сақтауда ынталандыру төлемдерін басқару: тұрақты денсаулық сақтауды дамыту үшін бизнес-шешімдер

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Аңдатпа. Бұл зерттеу біріншілік медициналық көмек жүйесіндегі ынталандыру төлемдерін және олардың денсаулық сақтау тиімділігі мен әділеттілігіне ықпалын қарастырады. Біз төрт негізгі еңбекақы төлеу моделін талдаймыз: қызмет үшін төлем, жан басына шаққан қаржыландыру, нәтижеге бағытталған төлем (P4P) және аралас тәсілдер.

Қазақстан 2009 жылы жан басына шаққан қаржыландыруды P4P элементтерімен енгізді. Біздің талдау осы жүйедегі үш негізгі парадоксты анықтайды. Біріншіден, тәуекелді түзету тетіктерінің әлсіздігі осал топтарға қызмет көрсететін ұйымдардың созылмалы түрде жеткіліксіз қаржыландырылуына әкеледі. Екіншіден, төлемдердің кешігуі қаржыландырудың

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болжамдылығын төмендетіп, қаржылық тұрақсыздық туғызады. Үшіншіден, пациенттерді іріктеп тіркеуге арналған ынталандыру жалпыға бірдей медициналық қамтудың мақсаттарына қайшы келеді. P4P компонентінде қосымша әлсіз тұстар бар: сапа көрсеткіштерінің күмәнділігі, нәтижелерді орындаушыға дұрыс телудің қиындығы және медициналық көмектің деңгейлері арасындағы интеграцияның төмендігі.

Халықаралық тәжірибеге (Қырғызстан, Өзбекстан, АҚШ) сүйене отырып, біз төрт оңтайландыру стратегиясын ұсынамыз: тәуекелді түзету модельдерін күшейту; әділеттілік пен қызмет көрсетушілерді қолдауға көңіл бөле отырып, P4P тетіктерін жетілдіру; төлемдердің кешігуін жою; базалық жалақы, әділ жанбасылық тарифтер және кәсіби даму мен еңбек жағдайларын жақсартуға бағытталған материалдық емес ынталандыруларды қамтитын кешенді мотивациялық жүйелерді дамыту.

Біздің нәтижелер жүйелік қолдаудың болмауы қаржылық тетіктердің кері ынталандырулар тудыруына әкелетінін көрсетеді. Бұл тұжырымдар еңбекақы төлеу саясатын әзірлеу, біріншілік медициналық көмектің сапасын жақсарту және денсаулық сақтау шығындарын оңтайландыруға ықпал етеді.

Түйін сөздер: біріншілік медициналық көмек (БМК), ынталандыру төлемдері, нәтижеге бағытталған төлем, жан басына шаққан қаржыландыру, денсаулық сақтау реформасы, медицина қызметкерлерінің мотивациясы.

Управление стимулирующими выплатами в ПМСП: бизнес-решения для устойчивого развития здравоохранения

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Аннотация. Статья посвящена анализу систем стимулирующих выплат в первичной медико-санитарной помощи как инструменту повышения эффективности и справедливости здравоохранения. Исследование базируется на критическом анализе четырех основных моделей оплаты труда медицинских работников: Fee-for-Service, капитационного финансирования, оплаты по результатам (Pay-for-Performance) и комбинированных подходов.

Анализ казахстанского опыта внедрения с 2009 года капитационного финансирования с элементами P4P выявляет три критических системных парадокса: недостаточная адекватность механизмов корректировки по рискам приводит к хроническому недофинансированию организаций, обслуживающих социально уязвимые популяции; хронические задержки платежей трансформируют механизм предсказуемости в инструмент финансовой нестабильности; структурные стимулы к селективному обслуживанию противоречат целям универсального охвата. Система P4P демонстрирует проблемы валидности показателей качества и неадекватной атрибуции результатов при слабой интеграции уровней оказания помощи.

На основе международного опыта (Кыргызстан, Узбекистан, США) предложены четыре направления оптимизации: совершенствование многофакторных моделей риск-корректировки; переработка P4P с фокусом на справедливость и поддержку; устранение задержек платежей; развитие комплексной системы мотивации, интегрирующей финансовые компоненты (адекватные оклады, справедливая капитация) и нефинансовые стимулы (профессиональное развитие, карьерный рост, улучшение условий труда).

Исследование демонстрирует, что фокусировка исключительно на финансовых механизмах без системной поддержки неизбежно создает контрпродуктивные стимулы.

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Результаты релевантны для органов управления здравоохранения при разработке политики оплаты труда, повышения качества ПМСП и оптимизации расходов.

Ключевые слова: ПМСП, стимулирующие выплаты, оплата по результатам, капитационное финансирование, реформа здравоохранения, мотивация медицинских работников

Introduction

Primary Health Care (PHC) forms the backbone of effective health systems and remains essential for achieving universal health coverage (World Health Organization, 2018) [1]. The 1978 Alma-Ata Declaration first positioned PHC as a priority in national health system development. Forty years later, the 2018 Astana Declaration reaffirmed this commitment in the face of new population health challenges (World Health Organization & UNICEF, 2018) [2]. Quality primary care depends fundamentally on motivated, professional healthcare workers. WHO evidence shows that countries with strong PHC systems achieve 30–40% better health outcomes at lower cost [3-5].

Kazakhstan, an upper-middle-income post-Soviet country [4], is transforming its healthcare system from the Soviet hospital-centered model toward primary care. The country launched mandatory social health insurance (MSHI) on January 1, 2020, now covering over 14 million people. This reform fundamentally changed how healthcare workers are financed and paid [6].

The PHC workforce includes approximately 18,000 physicians and 35,000 mid-level healthcare workers, but shortages persist. Rural areas face the most severe gaps, with only 68% of physician positions filled [7-10].

Despite major financing reforms, Kazakhstan's incentive payment system faces serious problems. First, no unified methodology exists for determining incentive payments or allocation criteria. Regional approaches vary widely - from simple salary supplements to complex point systems. This creates inequities and reduces transparency [11].

Second, quantity trumps quality in physician performance assessment. A 2023 survey found that 67% of PHC physicians said their incentive payments depended more on patient volume than care quality, driving a formalistic, volume-focused approach [12].

Third, financial incentives fall short of expectations. PHC physicians earn about 280,000 tenge (roughly USD 600) on average - 20–30% less than university-educated professionals in other sectors. This pay gap fuels workforce attrition: approximately 8% of PHC physicians leave annually, mostly young doctors with under five years' experience [10].

Fourth, COVID-19 intensified professional burnout. WHO data show that 41–52% of healthcare workers experienced burnout during the pandemic, with higher rates among women (76% of Kazakhstan's PHC physicians), early-career professionals, and parents of young children [2]. Inadequate motivation and support systems worsened these challenges, harming both care quality and patient satisfaction [13].

Work motivation theory traces back to Maslow's hierarchy of needs (1943), Herzberg's two-factor theory (1959), Vroom's expectancy theory (1964), and modern self-determination frameworks [14,15]. Franco et al. (2002) showed that healthcare worker motivation combines intrinsic factors (professional duty, altruism) with extrinsic ones (pay, recognition, working conditions, career prospects).

Healthcare remuneration systems have been extensively studied [13,14]. The main payment models - fee-for-service, capitation, salary, pay-for-performance, and mixed approaches - each shape physician behavior differently. Fee-for-service increases service volume but risks overtreatment. Capitation encourages prevention but risks undertreatment. Pay-for-performance theoretically drives quality improvement but requires valid, reliable measurement [16-18].

International research [17] shows that successful incentive systems combine financial and non-financial elements, balance quantitative and qualitative indicators, and adapt to local contexts [9,17].

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Post-Soviet studies [19] examine remuneration reforms in Russia, Ukraine, and Central Asia. However, Kazakhstan-specific research remains limited. Existing studies [17] describe the overall system structure but lack deep analysis of incentive mechanisms under MSHI.

A gap exists between established international theory on incentive systems and our understanding of how these mechanisms work in Kazakhstan's transforming healthcare system.

Research objective: To analyze incentive payment systems in healthcare, examining both theoretical frameworks of worker motivation and contemporary remuneration models in primary health care.

Materials and methods

1. Structure of the healthcare system

Kazakhstan’s healthcare system is centrally managed by the Ministry of Health, which is responsible for developing national health policies, regulating medical institutions, and defining benefit packages. Regional (provincial) health departments are tasked with delivering primary, secondary, and tertiary care.

Since 2020, two complementary benefit packages provide state-funded medical services: the State Guaranteed Benefit Package and the Social Health Insurance Package. Both packages are administered by the Social Health Insurance Fund (SHIF), but they operate with separate funding pools.

2. Research design

The present study is based on the mixed-methods approach, which combines quantitative and qualitative methods of data collection and analysis. This approach allows us to gain a comprehensive understanding of the functioning of the incentive payment system in terms of both statistical patterns and the subjective experience of medical professionals (Creswell & Plano Clark, 2017). The study was conducted in the period from January to August 2025 on the basis of primary care medical organizations in the Turkestan region (a predominantly rural region with a high population density).

3. Analysis of the regulatory framework

The first stage of the quantitative study involved a systematic analysis of regulatory documents governing the remuneration and incentive payment system for PHC workers. The following categories of documents from 2018 to 2024 were examined: (1) laws of the Republic of Kazakhstan (e.g., *On Mandatory Social Health Insurance*, *On the Health of the People and the Healthcare System*); (2) Government resolutions; (3) orders of the Ministry of Health of the Republic of Kazakhstan; and (4) local regulatory acts of medical organizations in the three studied regions (Bowen, 2009).

Documents were analyzed using content analysis, focusing on the following parameters: types of incentive payments, criteria for allocation, calculation methods, sources of funding, payment frequency, and recipient categories. To systematize the information, a specialized analysis matrix was developed in Microsoft Excel, enabling the comparison of regional variations in the application of incentive mechanisms (Braun & Clarke, 2006).

In parallel, an analysis of anonymized administrative data on the salaries and incentive payments of primary care physicians for the period 2022–2024 was conducted.

Results

1 PHC Payment Models and Their Systematic Analysis

Our literature review identified four main remuneration models for primary healthcare workers (Figure 1). Each model has distinct financing mechanisms with different effects on system performance.

Fee-for-Service (FFS) is the most common PHC payment model. Providers earn more when they deliver more services - a straightforward proportionality between interventions and pay. This creates clear financial incentives for activity and initiative. However, it also encourages

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overtreatment. Physicians may perform unnecessary tests or procedures to boost income, wasting resources and potentially harming patients. This is especially problematic in primary care, where prevention and coordination should take priority over service volume.

Capitation financing works differently - providers receive a fixed amount per registered patient, regardless of services delivered. This shifts financial risk to providers and flips the incentive structure. Capitation encourages prevention and reduces unnecessary interventions, making healthcare spending more predictable. But it also creates opposite risks. Providers may underserve patients, especially those with complex needs, since the payment stays fixed. Without proper risk adjustment, facilities can game the system by enrolling healthier patients and avoiding sicker, more expensive ones. This marginalizes vulnerable populations.

Pay-for-Performance (P4P) adds bonuses for meeting quality and efficiency targets. In theory, this aligns provider interests with system goals by rewarding good outcomes. In practice, significant problems emerge. Many quality indicators are hard to measure validly in primary care, where outcomes depend on factors beyond provider control. The system can distort clinical practice - doctors focus on measurable targets while neglecting important but unmeasured aspects of care. Gaming behaviors appear: cherry-picking patients, manipulating data to hit targets. These undermine both objectivity and fairness.

Hybrid models combine multiple payment mechanisms - typically capitation as the base, with P4P bonuses and selective fee-for-service for specialized services. This approach tries to balance competing incentives. Success depends heavily on design quality, component balance, and risk-adjustment adequacy. The complexity *and information infrastructure requirements can be barriers, especially in resource-limited settings.*

Figure 1. Remuneration Models in Primary Health Care (PHC)

2. Healthcare Financing

Kazakhstan spends over 4% of GDP on healthcare, with public funding at 2.6% of GDP - meeting WHO's minimum recommendation for achieving Sustainable Development Goals. Per capita spending rose dramatically from USD 50 in 2000 to USD 273 in 2018. Among CIS countries, Kazakhstan maintained relatively high government share in total health spending, though out-of-pocket payments still reached 33.5% in 2018.

Yet spending levels don't match performance. Despite substantial investment, the system shows limited access to innovative diagnostics and treatments, slow adoption of evidence-based practices. This suggests structural inefficiencies in how resources are allocated and used.

The 2025–2027 Republican Budget (Law No. 141-VIII, December 4, 2024) sets key financial indicators (Figure 2):

- Monthly Calculation Index (MCI): 3,932 KZT

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- Minimum Wage (MW): 85,000 KZT
- Subsistence Minimum: 46,228 KZT
- Minimum Pension: 62,771 KZT
- Basic Pension Payment: 32,360 KZT

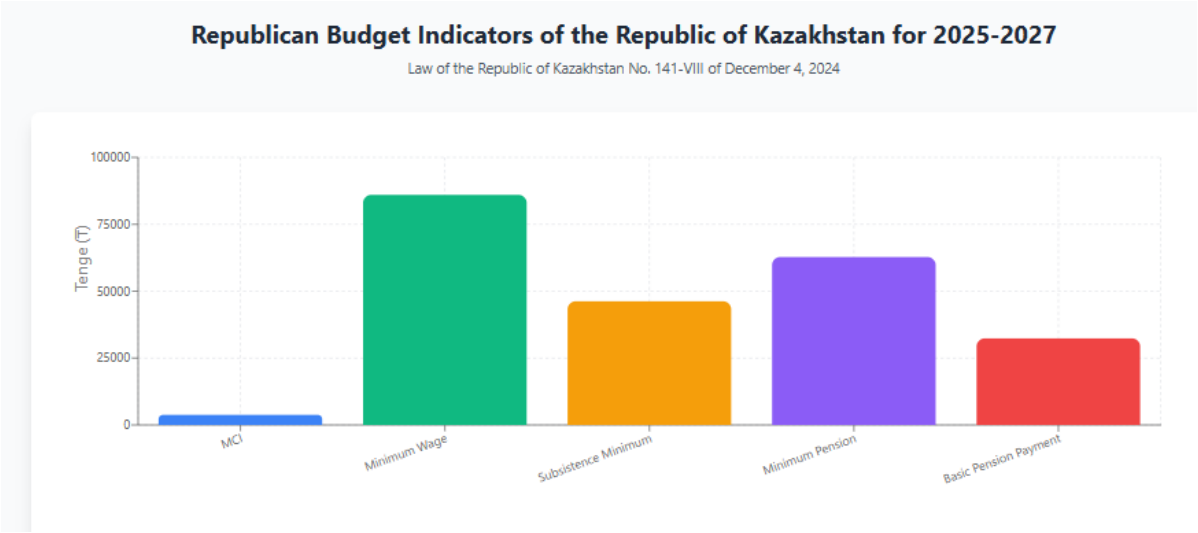

Figure 2. Key Indicators of the Republican Budget of the Republic of Kazakhstan for 2025–2027

The Monthly Calculation Index (MCI) is used to calculate benefits and other social payments, as well as to determine fines, taxes, and other mandatory contributions. The minimum wage (MW) is intended to include all types of incentive payments (bonuses and allowances), compensations, and social benefits.

3. Incentive Payment Management in PHC

Since 2009, Kazakhstan's PHC system uses capitation financing supplemented by pay-for-performance elements (Table 1). Each facility receives a fixed amount per registered resident, adjusted for demographics, socioeconomic factors, and regional epidemiology.

Table 1 – Capitation Financing Model with Risk Adjustment

1	**Advantages of the Model:**	- Predictable financing for service providers - Encouragement of preventive activities - Focus on continuity of care - Reduction of the risk of overprovision of services
2	**Implementation Challenges:**	- Need to develop an adequate risk-adjustment system - Risk of under-provision of services for complex patients - Payment delays from the Social Health Insurance Fund (SHIF) - Financial pressure on providers in cases of untimely payments

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Capitation brings predictability for budget planning, incentivizes prevention, and encourages continuous patient management. It should reduce unnecessary services and promote efficient resource use.

But implementation problems emerged. The biggest issue is inadequate risk adjustment. Current demographic coefficients (age, sex, location) miss crucial social determinants of health - poverty, education, ethnicity. Facilities serving vulnerable populations with high chronic disease burdens get systematically underfunded. This isn't a minor technical problem; it's a structural flaw that punishes providers for serving those who need care most.

Payment delays from the Social Health Insurance Fund (SHIF) create another major problem, especially in rural and financially constrained regions. Late payments pressure providers, making it hard to pay staff salaries and cover basic supplies. The state effectively shifts insolvency risk to healthcare organizations - exactly the opposite of what capitation should do.

Under financial pressure, capitation may push providers to avoid complex, multimorbid patients who consume more resources. This contradicts equity principles in Kazakhstan's healthcare law.

Pay-for-Performance in Kazakhstan

The P4P system adds bonuses for meeting targets in four areas:

1. Preventive coverage (vaccination, NCD screening)
2. Chronic disease management quality (diabetes, hypertension)
3. Patient satisfaction
4. Resource efficiency

The concept is sound: link pay to care quality, shifting focus from volume to outcomes.

But implementation reveals serious flaws. Many indicators don't actually measure quality well. They're proxies that can be manipulated. Vaccination rates get inflated by counting people with contraindications - unethical and clinically inappropriate. Chronic disease indicators depend on patient adherence, socioeconomic factors, and hospital care quality - all beyond PHC control. This creates unfair payment distribution and demoralizes staff working with disadvantaged populations.

Worse, the system offers no support for underperforming facilities. Without technical assistance, training, or resources, P4P just widens existing quality gaps between regions and urban-rural areas.

Discussion. Our analysis of remuneration models in primary health care exposes a fundamental tension between theoretical premises and actual implementation outcomes in Kazakhstan's healthcare system. The four main models - Fee-for-Service, capitation, Pay-for-Performance, and hybrid approaches - each have inherent advantages and critical limitations requiring targeted adjustments for Kazakhstan's specific context.

Kazakhstan's healthcare financing structure shows substantial growth: public investment stands at 2.6% of GDP, with per capita expenditure rising from USD 50 in 2000 to USD 273 in 2018 [13]. This represents a genuine expansion of the resource base. Yet a significant mismatch exists between increased funding and system performance, pointing to structural inefficiencies in how resources get allocated and used.

Capitation financing, introduced in 2009, was a well-founded strategic decision based on international experience. But our analysis reveals something deeper than implementation shortcomings - it uncovers a systemic paradox [20]. A model designed to enhance equity and efficiency has produced the opposite effect in practice.

Paradox One: Demographic Reductionism in Socially Determined Health. The first contradiction stems from "demographic reductionism." Current adjustment systems rely on age, sex, and place of residence - factors chosen because they're easy to formalize statistically [21-23]. The underlying assumption was that these demographics could capture major differences in healthcare needs. They can't.

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Key determinants of primary care demand in Kazakhstan - socio-economic status, education level, ethnicity, degree of urbanization - aren't incorporated into adjustment coefficients. Organizations in socially deprived regions end up chronically underfunded relative to their actual workload [24].

This exemplifies a broader problem: transplanting international adjustment methodologies without adapting them to local epidemiological and social contexts inevitably redistributes deficits rather than resolving them. The system punishes providers who serve vulnerable populations.

Paradox Two: Predictable Financing as a Source of Operational Unpredictability. Here's the second paradox: a system designed to ensure predictable budgets has instead created financial instability. Chronic payment delays from the Social Health Insurance Fund (SHIF) reflect a fundamental problem in Kazakhstan's budgetary system - setting expenditure plans doesn't guarantee adequate cash execution [25-28].

Rural institutions are particularly vulnerable. They have smaller financial buffers to absorb delays. The capitation mechanism has shifted from a tool for reducing financial risk to a means of redistributing it in favor of the state and to the detriment of healthcare organizations. This contradicts the basic principle of equitable risk distribution within financing systems [29-30].

Paradox Three: Creating Structural Incentives for Unequal Service Provision While Pursuing Universality. Under conditions of inadequate capitation - especially with payment delays - organizations are forced to adapt. They focus on patients with predictable costs and avoid complex cases. This illustrates a theoretical principle: externally imposed incentive systems, when combined with resource constraints, inevitably generate adaptive provider behaviors aimed at minimizing risk at the expense of care quality.

The paradox cuts deep: incentives originally intended to promote universal coverage and equity structurally produce the opposite outcome [31]. Providers aren't being irrational or unethical - they're responding rationally to perverse incentives.

Our findings gain depth when compared with regional and international experiences. Kyrgyzstan introduced a mandatory health insurance fund with capitation payments in 1996 but abandoned the Pay-for-Performance system by 2021, reverting to basic capitation financing [32-35]. This provides an important lesson: even after long-term implementation, P4P may prove insufficiently effective.

Kazakhstan, like Uzbekistan and Kyrgyzstan, has chosen hybrid financing models. But Kazakhstan possesses a larger resource base - public healthcare expenditure at 2.6% of GDP ranks among the highest in the CIS [36-40]. This creates both opportunities for more ambitious reforms and a responsibility to utilize existing resources more efficiently.

The U.S. experience offers an alternative approach worth examining. The Affordable Care Act and National Health Service Corps integrate financial mechanisms with systemic human resource support, including student loan forgiveness programs and incentives for working in underserved areas [38]. Our results show that Kazakhstan's system insufficiently incorporates such non-financial motivational components.

These results demonstrate that Kazakhstan's current primary health care financing system, despite substantial investments and theoretically grounded mechanisms (capitation with P4P), contains structural problems hindering the achievement of equity, efficiency, and quality objectives [41].

Critical dysfunctions relate to:

- The adequacy of risk-adjustment mechanisms
- The reliability of financing
- The validity of quality indicators
- The lack of integration of non-financial motivational components

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Recommended optimization strategies draw on international experience, theoretical foundations of human resource management in healthcare, and practical lessons from Kazakhstan's system [42]. Implementing these changes requires coordinated engagement across all levels of the healthcare system and corresponding adjustments to the regulatory framework, aligned with principles in Kazakhstan's State Programs for Healthcare Development [43-45].

A systemic approach can facilitate the transition from mechanical application of financial instruments to creation of a genuinely equitable, efficient, and professionally rewarding primary health care system.

Limitations of the Study and Directions for Future Research

This study focused on analyzing financing systems and remuneration models but didn't directly examine healthcare workers' perceptions of existing mechanisms and their influence on practical behavior. Quantitative data on the actual relationship between applied financial mechanisms and quality-of-care indicators require further analysis.

Future research should incorporate qualitative components - in-depth interviews with healthcare providers and facility administrators - and analyses of healthcare institution data from the Social Health Insurance Fund and statistical systems. This would document the real-world impact of these mechanisms on care quality and accessibility. Comparative studies examining reform outcomes in neighboring regional countries would also provide valuable insights.

Conclusion. Incentive payment management in primary health care is critically important for sustainable healthcare system development. Effective systems need to integrate multiple remuneration mechanisms - combining financial and non-financial incentives - while remaining transparent, equitable, and quality-oriented.

Kazakhstan stands at a pivotal point in its healthcare transformation. Mandatory social health insurance (MSHI) implementation, the shift to capitation financing with P4P elements, and the focus on strengthening primary health care create real opportunities to build an effective motivation system for healthcare workers. But significant challenges persist: inadequate funding, uneven resource distribution, and gaps in monitoring and evaluation.

Reform success depends on comprehensive approaches that go beyond financial mechanisms. Organizational culture matters. Professional values of healthcare workers matter. Population needs and system capacity matter. International experience shows there are no universal solutions—each country must adapt best practices to its own context.

To achieve the Sustainable Development Goals and universal health coverage, Kazakhstan needs to continue these reforms. Three priorities stand out: strengthening primary health care, ensuring equitable resource allocation, and creating a genuinely motivating environment for healthcare professionals.

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