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IMPLEMENTATION COMPLETION AND RESULTS REPORT

4883-KZ

ON A

LOAN

IN THE AMOUNT OF US\$117.7 MILLION

TO THE

REPUBLIC OF KAZAKHSTAN

FOR A

HEALTH SECTOR TECHNOLOGY TRANSFER AND INSTITUTIONAL REFORM ( P101928 )

December 28, 2017

Health, Nutrition & Population Global Practice  
Europe And Central Asia Region

## CURRENCY EQUIVALENTS

(Exchange Rate Effective December 2017)

Currency Unit = Kazakh Tenge (KZT)

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KZT 332.4 = US\$1

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US\$ = SDR 1

FISCAL YEAR

July 1 - June 30

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## ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome	ISPOR	International Society for Pharmacoeconomics and Outcomes
BTS	Blood Transfusion Service	ISQua	International Society for Quality
CAC	Codex Alimentarius Commission	IT	Information Technology
CCT	Core Coordination Team	JERP	Joint Economic Research Program
CDC	Centers of Disease Control	JSC	Joint Stock Company
CEO	Chief Executive Officer	KZT	Kazakhstan Tenge
CFAA	Country Financial Accountability Assessment	MCH	Maternal and Child Health
CIS	Commonwealth of Independent States	MHI	Mandatory Health Insurance
CME	Continuous Medical Education	MIT	Ministry of Industry and Trade
CPD	Curative and Preventive Department	MOA	Ministry of Agriculture
CPG	Clinical Practice Guidelines	MOEBP	Ministry of Economy and Budget Planning
DEF	Department of Economic and Finance	MOF	Ministry of Finance
DRG	Diagnosis-Related Group	MOH	Ministry of Health
DSDIC	Department for Strategic Development and International Cooperation	MOLSP	Ministry of Labor and Social Protection
EBM	Evidence based Medicine	NCD	Non-Communicable Diseases
EC	Expert Council	NHIC	National Health Information Center
ECA	Europe and Central Asia	NPV	Net Present Value
EDQM	European Directorate for the Quality of Medicines & HealthCare	OFD	Oblast Finance Department
EPC	Economic Policy Council	OHD	Oblast Health Departments
FAO	Food and Agriculture Department	OMCL	Official Medicines Control Laboratories
FMS	Financial Management System	PAD	Project Appraisal Document
FSU	Former Soviet Union	PAF	Project Accelerating Funds
GDP	Gross Domestic Product	PHC	Primary Health Care
GFATM	Global Fund to fight AIDS, TB and Malaria	PIST	Project Implementation Support Team
GOK	Government of Kazakhstan	PMO	Prime Minister's Office
GOSO	State General Mandatory Education Standard	POM	Project Operational Manual
HACCP	Hazard Analysis and Critical Control Points	PPP	Public Private Partnership
HALE	Healthy Life Expectancy	QCBS	Quality and Cost-Based Selection
HCDI	Health Care Development Institute	RBC	Republican Budget Commission
HCSCC	Health Care Services Control Committee	RCHD	Republican Center for Health Development
HDI	Health Development Institute	SARS	Severe Acute Respiratory Syndrome
HiT	Health Systems in Transition	SES	Sanitary and Epidemiological Surveillance
HIV	Human Immunodeficiency Virus	SESAM	Society in Europe for Simulation applied to medicine
HMIS	Health Management Information System	SPS	Sanitary and Phytosanitary
HPC	Health Policy Council	SPCBT	Scientific Production Center for Blood Transfusion
HTA	Health Technology Assessment	SPU	State Procurement Unit
HYLG	Healthy Years of Life Gained	TA	Technical Assistance
IAMRA	International Association of Medical Regulatory Authorities	TB	Tuberculosis
IBRD	International Bank for Reconstruction and Development	UHS	Unified Health Information System
ICB	International Competitive Bidding	UN	United Nations
ICPPC	Internal Control and Public Procurement Committee	UNAIDS	Joint United Nations Program on HIV/AIDS
ILO	International Labor Organization	UNICEF	United Nations Children's Fund
IMR	Infant Mortality Rate	VHI	Voluntary Health Insurance
INAHTA	International Network of Agencies for Health Technology Assessment	WFME	World Federation of Medical Education
IRR	Internal Rate of Return	WTO	World Trade Organization

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**DATA SHEET**

**BASIC INFORMATION**

**Product Information**

Project ID	Project Name
P101928	HEALTH SECTOR TECHNOLOGY TRANSFER AND INSTITUTIONAL REFORM ( P101928 )
Country	Financing Instrument
Kazakhstan	Specific Investment Loan
Original EA Category	Revised EA Category
Not Required (C)	

**Organizations**

Borrower	Implementing Agency
REPUBLIC OF KAZAKHSTAN	Ministry of Health (MoH)

**Project Development Objective (PDO)**

Original PDO

To introduce international standards and build long-term institutional capacity in MOH and related healthcare institutions in support of key health sector reforms pursued by the Government of Kazakhstan in the context of the State Health Care Reform and Development Program.



**FINANCING**

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
<b>World Bank Financing</b>			
IBRD-48830	117,700,000	117,673,017	112,554,400
<b>Total</b>	<b>117,700,000</b>	<b>117,673,017</b>	<b>112,554,400</b>
<b>Non-World Bank Financing</b>			
Borrower	179,000,000	114,257,200	106,754,100
<b>Total</b>	<b>179,000,000</b>	<b>114,257,200</b>	<b>106,754,100</b>
<b>Total Project Cost</b>	<b>296,700,000</b>	<b>231,930,217</b>	<b>219,308,500</b>

**KEY DATES**

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
15-Jan-2008	15-Dec-2008	11-Nov-2011	30-Jun-2013	30-Jun-2017

**RESTRUCTURING AND/OR ADDITIONAL FINANCING**

Date(s)	Amount Disbursed (US\$M)	Key Revisions
11-Oct-2012	39.56	Change in Results Framework Change in Components and Cost Change in Loan Closing Date(s) Change in Implementation Schedule
27-Jul-2015	61.21	Change in Loan Closing Date(s) Cancellation of Financing

**KEY RATINGS**

Outcome	Bank Performance	M&E Quality
Satisfactory	Satisfactory	Modest

**RATINGS OF PROJECT PERFORMANCE IN ISRs**

<b>No.</b>	<b>Date ISR Archived</b>	<b>DO Rating</b>	<b>IP Rating</b>	<b>Actual Disbursements (US\$M)</b>
01	16-Dec-2008	Satisfactory	Satisfactory	0
02	19-Jun-2009	Satisfactory	Moderately Satisfactory	0
03	23-Dec-2009	Satisfactory	Moderately Satisfactory	.94
04	30-Jun-2010	Moderately Satisfactory	Satisfactory	6.81
05	08-Jan-2011	Satisfactory	Satisfactory	16.59
06	27-Dec-2011	Moderately Satisfactory	Moderately Satisfactory	27.04
07	26-Jun-2012	Satisfactory	Moderately Satisfactory	36.41
08	03-Jan-2013	Satisfactory	Moderately Satisfactory	41.56
09	25-Jun-2013	Moderately Satisfactory	Moderately Unsatisfactory	46.28
10	10-Aug-2013	Moderately Satisfactory	Moderately Unsatisfactory	48.36
11	06-Mar-2014	Satisfactory	Moderately Satisfactory	52.57
12	18-Oct-2014	Satisfactory	Moderately Satisfactory	55.19
13	31-Dec-2014	Satisfactory	Moderately Unsatisfactory	57.08
14	30-Mar-2015	Satisfactory	Moderately Unsatisfactory	58.21
15	28-Aug-2015	Satisfactory	Moderately Satisfactory	61.49
16	13-Jan-2016	Satisfactory	Moderately Satisfactory	65.73
17	13-Jul-2016	Satisfactory	Moderately Satisfactory	69.35
18	14-Dec-2016	Satisfactory	Satisfactory	87.80
19	14-Jun-2017	Moderately Satisfactory	Moderately Satisfactory	101.43



**SECTORS AND THEMES**

**Sectors**

Major Sector/Sector (%)

**Public Administration 100**

Central Government (Central Agencies) 10

Sub-National Government 4

**Education 100**

Tertiary Education 3

**Health 100**

Health 83

**Themes**

Major Theme/ Theme (Level 2)/ Theme (Level 3) (%)

**Public Sector Management 33**

Public Administration 33

Administrative and Civil Service Reform 33

**Human Development and Gender 67**

Health Systems and Policies 67

Health System Strengthening 67

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## I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

### A. CONTEXT AT APPRAISAL

#### Context

- 1. Country and Sector background.** Kazakhstan inherited from the Soviet Union a health system based on outdated norms and practices, delivered through an oversized network of publicly-owned facilities, managed through direct control rather than through regulation/contracting, and with few incentives for efficiency or quality. For a country with rapidly increasing income, Kazakhstan's health indicators were not encouraging. Kazakhstan had among the highest rates of tuberculosis (TB) in the Former Soviet Union (FSU) and indicator of infant mortality was 21.5 in 2008 that is 5 times higher than the EU average and one of the highest among FSU countries. Adult mortality from heart disease, tobacco- and alcohol-related diseases and injuries were among the highest in the European region. Kazakhstan's health system was not capable to meet these challenges even though several reform programs had been attempted over a period of 10 years prior to the Project appraisal. Key institutional reforms in health financing, expanding the scope of private sector involvement, strengthening information systems and introducing incentives for efficiency and quality had moved slowly, and the sector's performance had been less than optimal.
- 2. With rapid economic growth fueled by natural resources, the Republic has embarked on a reform and investment program designed to propel it into the ranks of the world's 50 most competitive nations.** This brought a broad range of issues such as human capital development, public administrative reform and World Trade Organization (WTO) accession under the common objective. The Government's aspirations for the health sector mirrored its intentions for the economy as a whole. Kazakhstan had adopted a State Health Care Reform and Development Program for 2005-2010. The Program set ambitious goals and a sensible reform path. The reform program required not only a physical upgrade of health facilities but also a substantial boost in the relatively low level of technical and managerial expertise existed in Kazakhstan in that time. It is for this reason that an institutional reform and technology transfer project was requested.
- 3. Country Partnership Strategy and Rationale for Bank involvement.** The Bank had been a leading agency in knowledge/technology transfer on health systems and had played this role in Kazakhstan for many years. The Government recognized the Bank as an important partner for its comparative strength in the planning and management of health care reform programs in transition economies and in supporting government-led reform programs. The Bank's relationship with Kazakhstan was guided by a Country Partnership Strategy (29412-KZ) approved by the Board on August 10, 2004. The Strategy envisaged a flexible lending program built around a jointly-funded non-lending program of economic and policy research: the Joint Economic Research Program (JERP). The JERP had been the Bank's primary instrument for policy dialogue on health issues since 2003. Topics covered had included inter alia health care quality, health financing, information systems, cost-effectiveness of HIV/AIDS, pharmaceutical policy and comparative health systems. The Project was also consistent with the Bank's Health Strategy (approved in 2007) and strongly reflected that strategy's focus on institutional strengthening.
- 4. Kazakhstan had a well-conceived State Health Care Reform and Development Program 2005-2010 that was**



developed by the Ministry of Health and approved by the Government of Kazakhstan. The Program was technically strong and was developed in a consultative process that included a broad range of health sector stakeholders. The Project was designed as a long-term type project to support the implementation of this Program and consecutive national health sector reform programs. The Bank stayed engaged in health care reform policy and ensured readiness to continue providing support to the Government of Kazakhstan. All Project components were integral parts of the Program’s second phase (2008-2010) and two consecutive national health care reform programs for the period 2011-2015 and 2016-2019. The design of the Project benefitted from significant client ownership and was in line with the Government’s reform program and sectoral goals. The Government’s commitment was also evident in the relatively large share of Government co-financing (50% = US\$107 million); the anchoring of several Project activities in whole-of-government reforms such as Public Administration Reform and Public Financial Management Reform; and the fact that the Government financed a large share of preparation costs from its own resources.

- 5. Another rationale for involving the Bank was to give Kazakhstan’s health reform program the benefit of World Bank’s quality assurance, project design, implementation management and policy advisory skills and draw on the Bank’s extensive experience with health reform programs in other ambitious middle-income countries. By involving the Bank as a financier, Kazakhstan would receive not only policy advice but also a partner with the full spectrum of implementation experience in issues where Kazakhstan needed most support.

Theory of Change (Results Chain)

- 6. The Project addressed important bottlenecks on the path to the achievement of the intended outcomes of the State Health Care Reform and Development Program 2005-2010, namely the implementation of comprehensive health care system reforms proposed by the Program. Low level of technical and managerial expertise existing in Kazakhstan were considered as the main barriers for health care reforms implementation. Therefore, the Project supported key sector reforms pursued by the Government by introducing international standards and building long-term institutional capacity in MOH and related healthcare institutions in health financing, management and investment planning; healthcare quality improvement; laboratory and blood transfusion system reform; medical education and medical science; health information systems; pharmaceutical policy; and food safety areas.

- 7. An overview of the Project results chain, derived from the PAD, is shown in Table 1 below:

Table 1: Result Chain

Table with 4 columns: Activities, Outputs, PDOs / Outcome, Long-term Outcome. Row 1: Financing twinning arrangements and consultancy to transfer internationally recognized standards and methods, analytical and planning tools, establishing systems for quality control. 1. Internationally accepted methods and modeling tools in health policy and financing introduced; 2. Network planning tools and new facility standards adopted; regional master plans developed; 3. Accreditation system of health facilities established; international criteria, procedures and standards for accreditation implemented; 4. System for continuous development and review of evidence-based CPGs established; 1. Introduction of international standards in MOH and related healthcare institutions in support of key health sector reforms pursued by the Government of Kazakhstan in the context of the State Health Care Reform and Development Program. Improved efficiency and equity of healthcare resources allocation; Improved financial protection of households; Improved quality of health care; Improved quality of medical graduates and improved ability to carry out medical research; Improved efficiency and quality of health institution management;



	<ol style="list-style-type: none"> <li>5. A quality control function for laboratories and blood transfusion system established;</li> <li>6. Admission criteria, curricula, teaching methods and materials and examination procedures in medical universities upgraded;</li> <li>7. ICT standards in line with major international standards developed;</li> <li>8. Internationally recognized methods for drug price control introduced; mechanisms to promote rational prescribing established;</li> <li>9. Food safety standards and practices harmonized with <i>the Codex Alimentarius</i> and other international standards.</li> </ol>		<p>Improved safety, efficacy, quality and affordability of drugs; Improved food safety.</p>
<p>Establishing new institutional structures to develop and implement health reforms, financing training of health care managers and health workers, providing equipment and supplies.</p>	<ol style="list-style-type: none"> <li>1. Establishment of Economic and Policy Analysis Unit in MOH;</li> <li>2. Improved capacity to plan, execute and monitor health spending;</li> <li>3. Improved capacity for long-term health care management training and investment planning;</li> <li>4. Establishment of Accreditation Agency and improved capacity of staff involved in accreditation;</li> <li>5. Built capacity for development of evidence-based CPGs and HTA; health workers trained in the updated CPGs and HTA.</li> <li>6. Restructured laboratory network and blood transfusion system network; upgraded skills and knowledge of laboratory staff, managers and policymakers;</li> <li>7. Upgraded capacity of Kazakhstan’s six medical universities; established independent institution for knowledge and skills assessment;</li> <li>8. Improved capacity for developing and managing health information systems; upgrading IT equipment;</li> <li>9. Establishment of institutions and improved capacity for developing and implementing rational pharmaceutical policy;</li> <li>10. Upgraded the knowledge and skills of staff involved in food safety oversight function.</li> </ol>	<ol style="list-style-type: none"> <li>2. Building long-term institutional capacity in MOH and related healthcare institutions in support of key health sector reforms pursued by the Government of Kazakhstan in the context of the State Health Care Reform and Development Program.</li> </ol>	



### **Project Development Objectives (PDOs)**

8. The overall development objective of the Project (as per PAD) was to introduce international standards and build long-term institutional capacity in MOH and related healthcare institutions in support of key health sector reforms pursued by the Government of Kazakhstan in the context of the State Health Care Reform and Development Program.
9. The wording of the Project Development Objective (PDO) was consistent throughout the main text and Annex 3 of the Project Appraisal Document (PAD) as well as the Loan Agreement.
10. The Project was meant to support the overall Government Health Care Reform Program but its real prospective was to introduce international standards and build long-term capacity.

### **Key Expected Outcomes and Outcome Indicators**

11. The key expected outcome indicators identified in the PAD and corresponded to the stated outcomes of the State Health Care Reform and Development Program were:
  - Improved efficiency and equity of health expenditure and better financial protection for households in oblasts that implement a comprehensive package of healthcare financing and management reforms;
  - Improved quality and efficiency of medical care through the establishment of functioning systems/ institutions for clinical practice guideline development/dissemination and health facility accreditation, and through improved performance in the laboratory and blood transfusion systems;
  - Improved quality of medical graduates and improved ability to carry out medical research through upgrading the medical/pharmacological education and research systems and introducing international standards;
  - Improved efficiency and quality in health facility management through access to reliable, timely health information from a unified health information system;
  - Improved safety, efficacy, quality and affordability of drugs through reforms in pharmaceutical procurement, pricing, prescribing monitoring, information provision, benefit package design and quality control; and
  - Improved food safety and speedier WTO accession through the introduction of international sanitary and phytosanitary norms.
12. The PAD also specified 55 intermediate outcome indicators related with strengthening health financing and management, health quality improvements, reform of medical education and medical science, health information system development, pharmaceutical policy reform, food safety and WTO accession, and project management.

### **Components**

13. The original components of the Project are summarized in Table 2 below. These components reflected then the



Government’s reform priorities and the design of the Government’s reform program:

Table 2: Project Components

Component	Sub-Component	Description	Cost
<b>Component A: Health Financing and Management</b>	<b>Subcomponent A1. Strengthening the Capacity for Health Policy and Strategy Formulation.</b>	Establishment and operation of Economics and Policy Analysis Unit in MOH to carry out economic and policy analysis and develop strategic options for policy reform and budget development in the health sector. Financing international TA, training, study tours and a series of special studies/surveys to provide factual input to policy decisions on financing issues.	<b>US\$ 6.1 million</b>
	<b>Subcomponent A2. Strengthening Budgeting, Planning and Management in the Health Sector.</b>	Capacity building activities to strengthen the ability of MOH and Oblast Health Departments to plan, execute and monitor health spending under three headings: collection, pooling and purchasing. Technology transfer of internationally-accepted methods and modeling tools in health policy and financing.	<b>US\$ 3.6 million</b>
	<b>Subcomponent A3. Management Training and Investment Planning for the Health Sector.</b>	Strengthening the capacity of health care managers and building capacity for long-term health care management training in Kazakhstan and introducing modern techniques for investment planning in the health sector	<b>US\$ 11.6 million</b>
<b>Component B: Health Care Quality Improvement</b>	<b>Subcomponent B1: Accreditation: Modernizing Standards for Health Facilities.</b>	Establishing an accreditation system and carrying out first-cut accreditation of at least 20 health facilities strengthening the capacity of staff involved in the design and implementation of accreditation system reforms.	<b>US\$ 10.5 million</b>
	<b>Subcomponent B2: Upgrading Clinical Practice and Introducing Health Technology Assessment.</b>	Establishing a system for continuous development and review of evidence-based clinical practice guidelines (CPG); supporting the development and dissemination of 20 international-standard CPGs in each of five key clinical specialties; training 60 percent of the workforce in each of these clinical specialties in the updated CPGs; and building the capacity of Kazakhstani specialists to carry out Health Technology Assessment (HTA) and conduct 3-4 HTAs.	<b>US\$ 34.6 million</b>
	<b>Subcomponent B3: Reform of Laboratories</b>	Supporting organizational reform, laboratory network restructuring and the establishment of a quality control function for state and private laboratories by upgrading skills and knowledge of laboratory staff, managers and policymakers.	<b>US\$ 4.7 million</b>
	<b>Subcomponent B4: Reform of Blood Transfusion System</b>	Supporting organizational reform, network restructuring and the establishment of a quality control function for the BTS and by upgrading skills and knowledge through training and study tours for laboratory staff, managers and policymakers.	<b>US\$ 10.1 million</b>
<b>Component C: Reform of Medical Education and Medical Science</b>	<b>Subcomponent C1. Reform of Undergraduate and Continuing Medical Education</b>	Upgrading admission criteria, curricula, teaching methods and materials, examination procedures and the overall structure of Kazakhstan’s six medical universities; supporting efforts to obtain international accreditation for at least one the medical universities; modernizing Kazakhstan’s licensing/attestation procedures for medical graduates; and upgrading and institutionalizing Continuing Medical Education in Kazakhstan.	<b>US\$ 6.5 million</b>
	<b>Subcomponent C2. Reform of Medical Science</b>	Designing, communicating and introducing a contemporary competitive system for priority-setting, reviewing and financing medical research; designing and introducing a system for patient protection in medical research; and introducing and providing training for researchers and research managers in internationally-recognized research management tools.	<b>US\$ 2.9 million</b>
<b>Component D: Health Information System</b>		Support for introduction of a world-class integrated Health Management Information System (HMIS) to three oblasts and one city as Phase I of a nationwide rollout; training of the user	<b>US\$ 188.6 million</b>



<b>Development</b>		community in informatics, computer literacy and use of the new system; information campaigns to inform the healthcare community and general public of the system's benefits and implications; and connectivity among all health facilities to provide real-time access to data on patient care, financial management and resource management.	
<b>Component E: Pharmaceutical Policy Reform</b>		Restructuring the drugs benefit system; introducing internationally-recognized methods for price control such as reference pricing and tender negotiation techniques; studying the reasons for the proliferation of counterfeit and substandard drugs and developing mechanisms to address them; establishing of institutional mechanisms to promote rational prescribing (e.g. drug information centers/bulletins, a National Formulary and advisory services); and using evidence-based analysis to remove of outdated and unreliable drugs from the market.	<b>US\$ 4.2 million</b>
<b>Component F: Food Safety and WTO Accession</b>		Harmonizing an agreed set of food safety standards and practices with the <i>Codex Alimentarius</i> and other key international standards; developing standards and specifications for food safety laboratories to comply with WTO requirements and obtaining accreditation for these laboratories; and upgrading the knowledge and skills of staff involved in food safety oversight functions.	<b>US\$ 8.7 million</b>
<b>Component G: Project Management</b>		Project management and monitoring and evaluation activities for the Project.	<b>US\$ 4.6 million</b>
<b>Total:</b>			<b>US\$ 296.7 million</b>

## B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

### Revised PDOs and Outcome Targets

14. The PDO was not revised.

### Revised PDO Indicators

15. The Results Framework was changed in October 2012 to reflect new priorities and activities included in the Project as part of the restructuring. In practice: (i) six original PDO indicators were removed as they didn't have measurable values, and (ii) six new PDO indicators were added, including:

- Increase in PHC funding;
- Improved financial risks protection as defined by reduced share of household health spending in total health expenditures;
- Master plans for capital investments, developed based on international best practice, used as a basis for capital investment allocations in at least 4 oblasts;
- At least two evidence-based disease management programs, which draw from international best practice and include incentives for health care providers and patients, developed and endorsed by the Ministry of Health;
- Number of public health facilities accredited by national accreditation body in accordance with international standards; and
- ICT standards corresponding to international standards and including standards of functional compatibility



approved by regulatory body in the area of health ICT and published.

16. The Intermediate Outcome Indicators were also revised. Ten new output indicators were added, including:

- Increased capacity for health policy analysis (as measured by number of national analytical reports produced annually);
- Master plans for capital investments developed for 16 regions based on international best practice;
- Oblast-level health network master plans endorsed for at least 4 oblasts;
- Evidence-based incentives for providers in disease management programs implemented;
- Incentives introduced, including revision of co-payments, for patients to comply with diseases management programs;
- IT-infrastructure for deployment of UHMIS in selected oblasts developed by the Ministry of Health;
- Functional ICT standards in line with major international functional standards developed by Health ICT Regulatory Body;
- Drug price reference system for drugs included in the National Formulary Book developed and adopted by the Ministry of Health;
- Health personnel receiving training (number);
- Health facilities constructed, renovated, and/or equipped (number).

17. Eight indicators were revised, one indicator was continued and 46 indicators were deleted entirely.

**Revised Components**

18. See Section “Other Changes” below.

**Other Changes**

19. The Project has undergone Level II restructuring two times.

*(i) First restructuring: October 2012*

20. The Project went through a level II restructuring, to: (i) extend the current Loan Closing Date by 30 months (from June 30, 2013 to December 31, 2015) as the Project experienced difficulties to finalize all the activities by the initial closing date and it was critical to align the Project with the duration of the Government’s Salamatty Kazakhstan Strategy, which was supposed to run until December 2015; (ii) amend the Results Framework, as discussed above; and (iii) reallocate funds among sub-components (Table 3) in order to use remaining Loan and Government funds estimated at US\$139 million (or 47% of total project costs of US\$296.1 million) to support implementation of a number of health sector reforms, which were developed under the Project and were ready to be implemented.

Table 3: Comparison of Allocations at Appraisal and at Restructuring by Component/Sub-component (In US\$ Million)

Component/sub-component	GOK	Bank	GOK/Bank
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	Appraisal	Restructuring	Appraisal	Restructuring	Total at Appraisal	Total at Restructuring
<b>A. Health Financing and Management</b>						
A.1 Health Policy and Financing	0.1	6.3	6.0	8.6	6.1	14.9
A2.1 Health Management Training	0.0	3.6	3.0	1.6	3.0	5.2
A2.2 Investment Planning	8.0	3.5	3.1	9.3	11.1	12.8
<b>B. Health Care Quality Improvement</b>						
B.1 Accreditation: Modernizing Standards for Health Facilities	4.3	12.4	6.2	1.2	10.5	13.6
B.2 Upgrade of Clinical Practice and Introduction of Health Tech. Assess.	29.9	16.5	4.7	4.5	34.6	21.0
B.3 Reform of Laboratory Service	4.7	0.9	0.0	2.3	4.7	3.2
B.4 Reform of Blood Transfusion System	2.8	6.0	7.3	6.5	10.1	12.5
<b>C. Reform of Medical Education and Science</b>						
C.1 Reform of Undergraduate and Continuing Medical Education	2.7	5.9	3.8	1.7	6.5	7.6
C.2 Reform of Medical Education and Science	2.9	0.1	0.0	0.7	2.9	0.8
D. Health Information System Development	109.2	94.2	79.7	71.6	188.9	165.8
E. Pharmaceutical Policy Reform	4.0	14.8	0.3	3.8	4.3	18.6
F. Food Safety and WTO Accession	8.7	11.0	0.0	0.0	8.7	11.0
G. Project Management	1.1	3.2	3.6	5.9	4.7	9.1
<b>TOTAL</b>	<b>178.4</b>	<b>178.4</b>	<b>117.7</b>	<b>117.7</b>	<b>296.1</b>	<b>296.1</b>

*(ii) Second restructuring: July 2015*

21. The Project went through another level II restructuring, to extend the project Closing Date by an additional 18 months to June 30, 2017 to complete activities under the Health Information System Development component of the Project as well as a few activities under the component on Pharmaceutical Policy Reform, including the procurement of additional laboratory equipment to strengthen the drug quality testing capacity and the installation and training for the new laboratory equipment for food quality control. In addition, due to some savings achieved in operational costs a partial cancelation of loan proceeds in the amount of US\$ 26,983.07 from the Operating Costs expenditure category was carried out at the request of the Ministry of Finance.

**Rationale for Changes and Their Implication on the Original Theory of Change**

22. The original theory of change was not modified, the assumptions remain as described in the original theory of change. The PDO and overall project design remained valid. The rationale for changes was related to the need to extend the Closing Date due to delays in Project implementation, to revise the Project Results Framework (RF) to ensure a more effective monitoring of progress towards PDO, and to align the Project to the Government’s Salamatty Kazakhstan Strategy.

**II. OUTCOME**

23. **A split rating methodology has not been applied to assess overall achievement of Project outcomes despite the revision of outcome indicators during first restructuring in October 2012.** The scope of the Project



remained the same. The changes mostly affected the reallocation of Project's funds between Components / Sub-components based on the improved estimation of the resources needed for the reforms implementation. The RF was changed to adjust six PDO indicators and some intermediate outcome indicators to be able to correctly measure and monitor progress in achieving the PDO.

## A. RELEVANCE OF PDOs

### Assessment of Relevance of PDOs and Rating

24. The relevance of the PDOs is rated as **High**.

25. The PDO is aligned with the current Country Partnership Strategy (67876-KZ), approved by the Board on March 30, 2012, which aims to raise efficiency in delivering critical public services. The Outcome 11 "Sharpening strategic approach to health reforms" is directly related to the PDO. The Project has underpinned a close policy engagement with the government and transformed policy dialogue from analysis of selected policy issues to an all-round assistance for the implementation of a comprehensive health reform strategy. The Project introduced international standards in and built institutional capacity in the areas of health financing and management, health management information system, pharmaceutical policy, health care quality improvement, medical education and science, and food safety. Thus, there were no shortcomings in the relevance of the PDOs to the current CPS. The PDO also aligns with the State Program of Health Care Development of Kazakhstan for the period 2016-2019 which focuses on continuing health reforms supported by the Project, including priority development of the people-oriented integrated care based on the improved PHC, improving quality of health services, implementing national pharmaceutical policy, increasing financial sustainability of the system, improving human resources for health care system, development of health sector infrastructure based on PPP and modern information technologies.

## B. ACHIEVEMENT OF PDOs (EFFICACY)

26. **The Project has had a significant impact on the overall Government Health Care Reform Programs.** The Project supported implementation of three consecutive comprehensive reform programs: State Health Care Reform and Development Program for 2005-2010, State Health Care Development Program "Salamatty Kazakhstan" for 2011-2015, and State Health Care Development Program "Densaulyk" for 2016-2019.

27. **The State Health Care Reform and Development Program 2005-2010 aimed to improve access to and the quality and efficiency of health services.** The implementation of the Program ensured a more consistent approach to health reforms. A new health financing system was set up that included pooling of funds at the oblast level, establishing the single-payer of health services at oblast level and improving the health purchasing mechanisms through a new provider payment system. These health financing reforms created conditions for greater competition and management autonomy. The financial protection of the population was improved through the introduction of the minimum standards for the State Guaranteed Benefit Package and outpatient drug benefits to vulnerable groups of population. Between 2004 and 2009, the financing of the State Guaranteed Benefits Package increased from 90.5 to 237.1 billion tenge, while health expenditure per capita increased from 8740 tenge to 30373 tenge correspondingly. Significant progress was made in introducing the principles of evidence-based medicine and new clinical practice guidelines that led to quality of care improvement, in particular with regards to maternal and child health and tuberculosis (TB).



28. **The State Health Care Development Program for 2011-2015 “Salamatty Kazakhstan” aimed to improve the health of the population, create a competitive health care system, and ensure the sustainable socio-demographic development of the country.** The program contributed to substantial improvement of health outcomes. Maternal mortality was reduced by 1.9 times, infant mortality by 1.7 times, and TB mortality decreased by 2 times. The overall mortality rate decreased by 15%, including mortality from cardiovascular diseases (CVDs). The program significantly improved access to and quality of health service. At the level of PHC the national screening program has been implemented for 11 socially significant conditions. The number of GPs increased by 30%. New PHC models, providing better management of chronic diseases, creating closer linkages with communities and providing social support for patients, have been implemented. Capitation payment for PHC providers, envisaging bonus payments based on performance has been introduced. Introduction of Unified National Health Care System with national pooling of health care funds led to more equal allocation of resources between the regions and to more equal utilization of health care regardless of place of residence. Restructuring of hospitals network and introduction of new provider payment system for inpatient care based on Diagnosis-Related Groups (DRG) improved efficiency and productivity of hospitals (average length of stay (ALOS) decreased by 27%) and accelerated development of the hospital replacing care. Access to advanced medical technologies was significantly improved, number of cardiovascular surgeries increased from 7000 to 85000 per year. The quality of care was improved through promoting evidence-based medicine, introducing effective clinical practice guidelines, and establishing mechanisms for facility-level quality improvement. Significantly improved access to free outpatient drugs, number of patents received access to free drugs increased by 3 times from 2011 till 2016 from 776 609 people to 2 million people in 2016, as well as access to expensive drugs for treatment of orphan diseases. E-health implemented IT systems providing to patient possibility to choose PHC center and hospital, following up the line for elective hospitalization.
29. **The World Bank Project supported the overall Government health reform programs but the specific nature of this Project was to target specific elements of that reform programs: introduction of international standards and building long-term institutional capacity.** The section below presents how the Project achieved that elements of PDO statement.

#### **Assessment of Achievement of Each Objective/Outcome**

30. The achievement of each of the two PDOs was assessed based on the proportion of outcome targets that were achieved. See Annex 1 presenting the RF with achievements against all target values.

#### **PDO 1: Introduce international standards in the MOH and related health care institutions in support of key health sector reforms in the context of the State Health Care Reform and Development Program.**

31. The achievement of PDO 1 is rated as Substantial. This evaluation is based on the achievement of key outcome indicators. Five out of six PDO indicators were achieved or surpassed and one indicator was not achieved as it attempted to measure outcomes that were not fully dependent on the Project outputs. Most of the intermediate outcome indicators were also achieved.

#### **Component A: Health Financing and Management**

32. **The country has begun a large-scale transformation of the health care system with an emphasis on primary**



**health care.** The share of funding for PHC in total health expenditures increased to 36.38% in 2016 from the baseline of 16% in 2011, thus the PDO indicator was surpassed. Funds for provision of PHC were consolidated and alignment between the regions in PHC financing was conducted with an increase in per capita financing by 2.8 times.

33. **Bases for making informed policy decisions and better policy analysis was created in the MOH by acquiring the National Health Accounts system based on OECD SHA methodology.** Annual analytical reviews of health financing flows based on NHA disaggregated by sub-national level and complemented by data on health outcomes provided the needed analytical to inform key policy decisions, e.g. on increasing a share of PHC expenditures.
34. **In spite of continued increase in public financing of the health sector, the out-of-pocket payments (OOPs) are growing.** The PDO indicator of improved protection from financial risks, expressed in reduction of household health expenditure portion in aggregate health expenditure was not achieved. The share of household out-of-pocket expenditure on health exhibited a steadily increasing trend over the Project period due to the country's worsening economic situation amidst global economic crisis (2015-2016). The large part of OOPs (37%) is channeled to cover expenses on medications, almost quarter (26%) on dentistry services, and one sixth (15%) to finance hospital care. Only 6% of OOPs are spent to cover basic primary care and no OOPs contributing to financing of preventive care, which suggests lack of barriers for population to get essential health care.
35. **Internationally accepted provider payment methods were implemented.** Implementing risk-adjusted capitation payment for PHC services in combination with performance-based payment approach has stimulated health service efficiency and quality improvement within UNHS and ensure rights of citizens to choose health facility. The performance based payments for PHC workers have increased by 2 times (in 2013 - 10.2 billion KZT, in 2014 - 20.3 billion KZT). DRG-based provider payment model for inpatient services has facilitated more transparent, efficient and fair use of health resources, and moving away from input-based financing to a more market-oriented model that finances outputs. As a result, the average length of stay has decreased from 12.3 days to 10.3 days, and bed turnover increased from 25.4 to 30.1. Implementation of DRGs incentivized development of advanced technologies, especially in organ transplantation and in cardio-surgery fields.
36. **Health care management technologies were modernized and professional management has been introduced in health institutions.** New professional standards for health managers based on the British professional standard have been applied in health management training system. An 18-month MBA in healthcare management with professional curriculum and large-scale training program for health care managers have been implemented. New specialty "Health care manager" was introduced in the classifier of specialties at Master's level.
37. **International best practices, standards and guidelines were synthesized to assist in development of the health care delivery restructuring model.** Regional master plans for capital investments were developed for all regions and Astana and Almaty cities based on the revised norms and standards for health facilities network planning. Master plans were used by regional health authorities as a base for developing Perspective Plans of health facilities network development until 2025. The PDO indicator "Use of master plans for capital investments, developed based on international best practice as a basis for capital investment funding, in at least 4 oblasts" was surpassed as master plans for capital investments were developed for all 16 regions of the



country.

38. **The master plans have provided a sound strategy** for strengthening PHC, restructuring of hospitals, reduction of overcapacity, and accelerated development of hospital-replacing (day care) and high-tech medical care. Hospital sector still has overcapacities compared to OECD countries. However, optimization of hospital network supported with the resources of the Project helped to decrease number of beds from 71 per 10 000 in 2011 to 58 in 2015, that is comparable with EU countries. The number of patients treated in day hospitals increased by 23.5%.
39. **The strategy for public-private partnership (PPP) development in the health sector for 2013-2017 was designed.** Changes in national legislation removed a ban on privatizations of health institutions. The equal conditions for participation of private and public entities in delivering health care services under the framework of State Guarantees Package have been created that intensified competitive environment. Share of private providers increased from 12% in 2010 to 27.4% in 2014.
40. **The Project played an important role in changing the regulatory environment to increase autonomy of health institutions.** More than half of health institutions changed their legal status from budget entities to more autonomously governed state enterprises. This has allowed for the introduction of new governance structures in health institutions, e.g. supervising committees, expanded the rights of institutions in defining the composition of services and using funds earned.

#### **Component B: Health Care Quality Improvement**

41. **Republic of Kazakhstan has achieved an impressive reduction of mortality rates over the period 2009-2017,** particularly in infant and maternal mortality, as well as mortality from cardiovascular diseases. Component B provided undoubtful input in health care quality improvement by establishing a well-functioning national accreditation system and a national system for development of evidence-based clinical guidelines, implementing disease management programs, increasing quality of laboratory and blood transfusion service.
42. **A well-functioning accreditation system recognized by the International Society for Quality in Health Care (ISQua) was established in Kazakhstan with Project support.** National accreditation standards of inpatient care, outpatient and emergency care, laboratory services and blood centers were updated in line with international requirements and approved by the MOH. Accreditation standards for inpatient and outpatient care were certified by ISQua till 2016 and 2017 correspondently. Finally, 746 facilities - inpatient and outpatient, public and private, at the republican and oblast levels - were accredited based on internationally recognized standards during the time of the Project. The planned PDO target was 40 facilities was significantly surpassed.
43. **The substantial progress was made in standardization of clinical practice and promotion of evidence-based medicine.** The Project played a key role in establishing a national system for continuous development and review of evidence-based clinical practice guidelines. Developing and widespread dissemination of 20 international-standard clinical guidelines in each of five key clinical specialties (the total number is 100) provided the base for developing 750 clinical protocols. More than 50000 copies of clinical protocols were published and disseminated to health facilities. According to the interviews with doctors, these are used in everyday practice. Clinical Guidelines and Clinical Protocols are available on the web-site of the HCDI:



<http://www.rcrz.kz/index.php/ru/o-centre/nashi-zhurnaly?id=165>. National Health Technology Assessment System created, with 14 HTA full reports, 70 HTA mini reports, 500 examination of high-tech medical services and 300 medicines were prepared.

44. **Three evidence-based disease management programs drawn from international best practice were developed and implemented.** The PDO indicator was fully achieved. According to the MOH, programs demonstrated positive results: stabilization of the blood pressure in 75% of patients, improving blood indicators among patients with diabetes, reducing hospital admissions by 2 times among the patients with chronic heart failure. After pilot approbation in 7 regions the MOH decided to start nation-wide implementation of the disease management program in 2018.
45. **The Project has been instrumental in increasing the quality of laboratory services.** Strategic plan for progressive modernization of clinical diagnostic laboratory services, guidelines for a quality management system, and key performance indicators for monitoring and evaluation of laboratory services quality developed. Five laboratories in Astana and in four oblasts prepared in accordance with international standard of quality management (ISO 15189). Laboratory master plans for all of 16 regions were developed.
46. **External quality control function for the blood transfusion service was established.** Scientific Production Center for Blood Transfusion has been prepared for international accreditation to meet requirements of international quality management system standard ISO17043.

#### ***Component C: Reform of Medical Education and Science***

47. **The Project was instrumental in improving the quality of medical education.** Criteria, procedure and standards for accreditation of basic medical education programs were developed, adopted and implemented in line with international practice. International standards on improvement of quality of basic medical education of World Federation of Medical Education (WFME) were implemented. Six public medical educational organizations received institutional accreditation on national level and, as result, were included in the World Health Organization's World Directory of Medical Schools. National accreditation of educational programs was received by 5 medical universities. New educational curricula based on competence based approach were developed, including curricula for "General Therapy" and "General Practitioner". Educational program of applied Bachelor degree in Nursing was designed and implemented in six medical colleges with subsequent nationwide rollout. The new approach for selection and admission of students to medical education organizations and implementing of Multiple Mini Interview was developed and piloted with the support of international consultants.
48. **An independent system for graduates' and health professionals' knowledge and skills assessment was established.** The Republican Center for Knowledge and Skills Assessment developed a methodology of assessment, a base of test tasks and examination materials based on the best international practice.
49. **The management of medical educational institutions has been changed.** All medical educational institutions received more autonomy with changing their legal status. The supervisory bodies were established and administrative staff was trained in modern management technologies.
50. **The Project supported establishing a national system of planning and forecasting of health human resources,**





based on the assessment of needs for planning and forecasting of health human resources for the period 2003-2013. The Plan for Development of Human Resources for Health System for 2013-2016 and the Plan for Nursing Service Development in the country until 2020 were developed.

51. **Concept for Medical Science Development until 2020 and Strategy for enhancing scientific and innovative capacity of health professionals of Kazakhstan until 2020 were developed.** Independent system for review of health research programs has been established, and ranking of scientific and medical educational institutions according to the results of their scientific and innovation activities is being implemented. Informational portal «Medical and pharmaceutical science in Kazakhstan» ([www.mednauka.kz](http://www.mednauka.kz)) was launched in 3 languages – Kazakh, Russian, English to improve research and information environment and establishing of national platform of practical use of skills and research data in health policy making.

#### ***Component D: Health Information System Development***

52. **The Project provided support to the development of e-Health system based on international standards and best international practice.** PDO indicator was achieved: ICT standards, which conform with international standards and include interoperability standards, are endorsed by Health ICT Regulatory Body and published. Eighteen basic e-Health standards developed and approved by the MOH and 2 international standards adopted and registered to have legal effect on the territory of the country.
53. **At the same time the initial target to support the establishment of the Unified Health Information System with development of IT infrastructure in 2000 health organizations was not achieved.** This is explained by the changes in the Government IT policy and approval in 2013 the new e-Health approach in the State Program “Informational Kazakhstan – 2020”. The Project has supported this major shift in the national health information policy by conducting an independent assessment of the adopted in 2004 Unified Health Information System approach and supporting the development of a new long-term Concept for e-Health development for 2013-2020. The key feature of the reform is the developing of conditions for demonopolization and decentralization, establishing open market of solutions when health facilities have the right for independent choice of health informatization system responsive to their specific requirements, re-orientation to patient needs. Key element of the e-Health is Electronic Health Records (EHR) - an instrument for keeping and exchanging of key health data, supporting collaboration of health care providers for ensuring continuity of care and improving management at all level of health care system. Based on the Concept of e-Health and e-Health standards a new architecture of e-Health was developed, including Health Informatization and Interoperability Platform ensuring integration of central information systems of the MOH and local health information systems of health facilities. While the process of the development of the platform for integration was initiated but it was not completed within the life of the Project. The Government promised to complete establishing e-Health systems. Recognizing the importance of the information systems, the Government has committed to finance their development from the co-financing part of the Project in 2018.

#### ***Component E: Pharmaceutical Policy Reform***

54. **The Project has supported the development of the key strategic documents - National Pharmaceutical Policy with implementation plan until 2020 and Strategy for Development of Outpatient Drug Benefits System until 2020 - aimed at improving population access to high-quality, effective and safe drugs.** The list of drugs provided free for outpatient treatment was significantly expanded with inclusion of drugs for treatment of



high-cost diseases as cancer, multiple sclerosis and orphan diseases. Population in rural areas received better physical access to medicines due to organizing the sale of medicines through rural primary care facilities in more than 3000 villages and mobile pharmacy units.

55. **Principles of rational prescribing and use of pharmaceuticals has been introduced by developing the national formulary system, providing a reliable, evidence-based information about medicines to patients and health professionals.** Kazakhstan National Drug Formulary developed based on the British National Formulary, with its web-based electronic version in Kazakh and Russian languages containing up-to-date, comprehensive and reliable information on over 640 generic drug names and about 2,000 brand names having evidence-based clinical efficacy with removal of outdated drugs or those lacking evidence-based efficacy information in internationally recognized sources.
56. **To improve quality of medicines the Drug Quality Testing laboratory of the Drug Expertise Center (DEC) were equipped and awarded full accreditation status under ISO 17025 standard requirements.** The DEC's laboratory received international accreditation from European Directorate for the Quality of Medicines and became an associate member of the OMCL/EDQM Network. Process for Kazakhstan's membership in the international Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme initiated.

#### ***Component F: Food Safety and WTO Accession***

57. **The objective of introducing of a robust, effective and internationally accepted system for the assurance of food safety in compliance with WTO requirements was fully achieved.** Kazakhstan's food safety regulations harmonized with requirements of WTO, FAO, and Codex Alimentarius, including 26 national technical regulations, 25 sanitary rules and norms, and the system of indicators of food products safety. Remarkably, most of these regulations were subsequently taken as the basis for adoption of food safety technical regulations for the whole Customs Union, and Kazakhstan has been one of the first CIS countries enacting a dedicated law on food safety. Hazard Analysis and Critical Control Points system (the monitoring system for identification and control of associated health hazards at food production, storage, and distribution stages) introduced in five enterprises of Karaganda region.

#### **PDO 2. Build long-term institutional capacity in the MOH and related healthcare institutions in support of key health sector reforms in the context of the State Health Care Reform and Development Program**

58. **The Project has built long-term institutional capacity in the MOH and related institutions that has played a critical role in implementing major health reforms in RK in 2011-2017 and laying the foundation for the future even more significant changes in the health care system.** The improved capacity ensured a high level of consistency and continuity in the implementation of three consecutive government health reform programs. Therefore, the rating for this part of the PDO is **Substantial**.
59. **Institutional capacity of the health sector has been strengthened through the establishment of and support to the following technical centers / functions:** (i) Center for Economic Research (2011); (ii) DRG Bureau (2012); (iii) Health Management Training Center (2010); (iv) Center for Planning, Monitoring and Evaluation of Investment Projects (2010); (v) Accreditation Center (2009); (vi) Center for Standardization and Health Technology Assessment (2009); (vii) Republican Center for Knowledge and Skills Assessment (2012); (viii)





National Observatory of Health Human Resources (2014, in partnership with WHO); (ix) Republican e-Health Development Center; (x) e-Health Standardization Unit of the Republican Center for Health Development (RCHD); (xi) National Drug Information Center with 16 regional branches and a toll-free call-center (2009; www.druginfo.kz); (xii) Editorial Office of the Kazakhstan National Drug Formulary; (xiii) Training and Resource Center for Good Practices (GXP); (xiv) Pharmaceutical Inspectorate Unit; (xv) Codex Alimentarius Inter-agency Coordination Council (www.codexalimentarius.kz); and (xvi) Inter-agency Information Center on TBT / SPS Measures; (xvii) Central Asia Training Center on Food Safety.

60. **All above listed technical centers / functions (most being housed under the umbrella of the Republican Center for Health Development - RCHD) are collectively a technical and methodological arm of the MOH**, and play a substantial role in the development of reform agenda by providing technical and analytical inputs for informed policy-making in their respective areas as well as in monitoring and evaluation of the reform outcomes and impacts. Their memberships in leading specialized international organizations allows them to stay abreast of and build further capacity in newly emerging development areas. Direct involvement in Project activities of such international technical agencies as WHO, CDC, and USAID-funded ZdravPlus Project also contributed to strengthening institutional and technical capacity in the health sector. Finally, the human resource capacity built over the Project period, with a total of 95,546 people trained, created a critical mass of competent professionals able to lead further improvements in the next stage of the health sector development.

#### ***Component A: Health Financing and Management***

61. **The improved capacity of the MOH, MOEBP, MOF, Committee for Purchasing of Medical Services and Oblast Administrations resulted in successful implementation of the important reforms in the area of health financing**, including more efficient allocation of health resources, introducing of regional financing equalization mechanisms, implementing DRG-based provider payment model for inpatient services and risk-adjusted capitation payment for PHC services in combination with performance-based payment approach, and moving toward output-based program budgeting.

62. **It is important to note that the Project laid foundations in the health system for a major health financing reform – introduction of Social Health Insurance (SHI) system in Kazakhstan.** Specialists of the MOH played a key role in preparing a concept and road map for SHI, developing legislation for SHI and actuarial estimates framework for Basic Health Service Package that demonstrated the institutional capacity built in the sector.

63. **Four key institutions were established at RCHD in 2010-2012.** The Center for Economic Research and Bureau of DRG lead development of reform agenda and participate in making decisions on key issues of health financing. The Center of Health Management was instrumental in establishing mechanism to develop and renew a trained, capable corps of health sector managers, more than 5700 managers participated in training programs within the country. The Center for Planning, Monitoring and Evaluation of Investment Projects provided support in developing restructuring strategy and regional master plans for optimization of health care delivery network, as well as in developing and implementing PPP projects.

#### ***Component B: Health Care Quality Improvement***

64. **The Project has led to important achievements in improving health care quality in Kazakhstan.** Kazakhstan became a member of 5 international medical agencies (ISQua, ISPOR, HTAi, INAHTA, GIN) that are the world



leaders in health care quality improvement.

65. **To improve capacity for health care quality improvement in 2009 the Accreditation Center was established under RCHD and entered membership of ISQua.** Accreditation Center under the RCHD has become an independent accreditation agency and received international accreditation from ISQua confirming its status. The institutional capacity acquired by the Accreditation Center now potentially allows to earn revenues and become self-financed technical agency, in line with the intended policy objectives.
66. **Using the certified training curriculum more than 160 trainers and 3500 specialists were train in accreditation procedures and standards using a “trainer of trainers” approach. Training curriculum was developed and certified by ISQua till 2018 to train accreditation experts, inspectors and trainers.** Implementation of accreditation in the country has contributed to a significant change in health managers’ mentality. As a result, the attitude of health facility managers to quality issues, in general, and organization of clinical processes in accordance with internationally recognized standards, in particular, has changed considerably.
67. **The Project played a key role in establishing a national system for continuous development and review of evidence-based clinical practice guidelines.** The Center of Standardization and Health Technology Assessment was set up in 2009 under the RCHD. The Project has been instrumental in strengthening the MOH and the Center capacity in upgrading clinical practice and introducing HTA. Evidence-Based Medicine units were established in medical institutions of high education. The Center of Standardization and Health Technology Assessment became a member of HTAi and INAHTA.
68. **The MOH’s capacity to review and disseminate the clinical guidelines/clinical protocols and to re-train a large cadre of health care providers in the new CPGs was strengthened.** Curricula on development of clinical guidelines/clinical protocols, Health Technology Assessment (HTA) and evidence-based medicine were developed and used to train more than 3000 specialists. Capacity building process involved not only the management and staff of the designated CPG/HTA agency but also medical practitioners and clinical scientists. That made Kazakhstan a member of the international HTA community and networks.
69. The capacity for continuous quality improvement system of laboratory services has been improved by training of 180 specialists of laboratories and 17 trainers on quality improvement. The Project has improved capacity of the Scientific Production Center for Blood Transfusion (SPCBT), prepared SPCBT for international accreditation and upgraded skills and knowledge of 150 specialists of blood services.
70. **The Project supported increasing awareness on voluntary blood donations.** The share of voluntary blood donations achieved 92% from the baseline of 83%, the absolute number of paid donations decreased from 38,800 to 20,467 by the end of the Project, thus the IR targets were fully met.

### ***Component C: Reform of Medical Education and Science***

71. **The Project supported the establishment of the Republican Center for Knowledge and Skills Assessment that was set up in 2012 and equipped with modern training simulation equipment.** The Center received national accreditation and became a member of IAMRA and SESAM. For effective organization of the process of assessing professional competencies of health specialist the network of regional simulation centers was created and equipped in all 16 regions of the country. Comprehensive testing of 3,680 internship graduates in 7 specialties of 8 medical universities and assessment of residency graduates of educational and research



institutions was conducted. Independent assessment of knowledge and skills of practitioners carried in priority areas of mother and child health and cardiovascular diseases. National pool of 38 experts on medical education quality assurance were trained. **A total of 695 people has been trained in various technical areas of medical education and science**, including 211 specialists trained abroad.

#### ***Component D: Health Information System Development***

72. **The Project has developed capacity for implementation of the national e-Health system.** Republican e-Health Development Center and e-Health Standardization Unit of the (RCHD) were established. The backbone of the e-Health system (two republican-level Data Processing Centers and Interoperability Platform) has been created, and the interoperability tests to be completed by December 2017 through the piloting of facility-based information systems in four different facilities (polyclinic, hospital, mother and child care center, and organ transplantation center). More than 19,000 specialists and administrators trained in e-Health design, implementation, and use. IT infrastructure was upgraded in Astana city and Akmola and Karaganda oblasts through the procurement of all necessary IT equipment.

#### ***Component E: Pharmaceutical Policy Reform***

73. **The capacity of the national formulary system has been strengthened and this has resulted in the development of the Kazakhstan National Drug Formulary (KNDF)** published on the web-site, establishing and training the editorial team for the maintenance of the KNDF, training of the teaching staff of the universities and health professionals on the use of KNDF.

74. **The Center for Rational Use of Medicine with 16 regional branches and Call Center** were established to increase the drug literacy of the people, promote rational drug use among health professionals and population, disseminate information on drugs quality, effectiveness and safety.

75. **The Project provided support in strengthening capacity for drug quality and safety assurance.** Drug Quality Testing laboratory of the Drug Expertise Center was equipped with modern laboratory equipment.

76. Over 40,000 people were trained in various aspects of pharmaceutical policy reform, including 78 trained abroad.

#### ***Component F: Food Safety and WTO Accession***

77. **Capacity of food safety control laboratories** of 11 regional centers of sanitary-epidemiological expertise was strengthened through the provision of modern laboratory and special equipment, and diagnostic tests.

78. **Kazakhstan's membership in the Codex Alimentarius** and other international organizations as well as establishment and functioning of Codex Alimentarius Inter-agency Coordination Council, Inter-agency Information Center on TBT / SPS Measures; and Central Asia Training Center on Food Safety was supported.

79. Around 2,400 food safety and laboratory specialists as well as food safety industry workers were trained in food safety/HACCP issues. Moreover, **the Central Asia Training Center on Food Safety/HACCP** has seen substantial demand for capacity building from other countries and **can be considered as a resource center for**



**international standards and new technologies in food safety in the Central Asia region.**

80. **Public awareness of food safety issues increased** through the development of the Strategy for communication and social mobilization in food safety and its large-scale implementation at the regional level, with the use of informational and educational materials developed under the Project.

**Justification of Overall Efficacy Rating**

81. The ICR rates efficacy as **Substantial** for both PDOs. This evaluation is based on the achievement of key outcome indicators. Most of the intermediate outcome indicators are also achieved.

Level of Achievement	PDO 1		PDO 2	
	PDO Indicators	Intermediate Outcome Indicators	PDO Indicators	Intermediate Outcome Indicators
Surpassed (100%+)	4	3	4	2
Achieved/Substantially (85%+)	1	10	0	0
Not Achieved (less than 50%)	1	3	1	0
<b>Total</b>	6	16	5	2
<b>% surpassed and achieved</b>	86%	82%	83%	100%

Efficacy	Ratings based on achievement of indicators
PDO 1	Substantial
PDO 2	Substantial
<b>Overall rating:</b>	<b>Substantial</b>

**C. EFFICIENCY**

**Assessment of Efficiency and Rating**

82. **The Project produced gains on efficiency (technical and allocative).** A complete analysis of the Project’s efficiency is presented in Annex 4. The technical efficiency (effectiveness) was achieved by improved service delivery of cost-effective health care services, especially for non-communicable diseases (NCDs). It has contributed to substantial improvements in health outcomes. Figure 4-1 (Annex 4) shows significant decrease in mortality rates, specifically in CVD-related deaths. The program financed activities that contributed to improving the supply and quality of a set of health services, such as antenatal and obstetric care, skilled birth, integrated management of childhood illnesses, improved management of NCDs with support from eHealth technologies, including routine screening for select NCDs such as hypertension, diabetes, and chronic heart failure, implementation of evidence-based technologies and guidelines for improved preventive and treatment approaches, safe blood transfusion and safer food. The Project’s allocative efficiency (investing in the right things) led to important reductions in the targeted Burden of Diseases (BoD) in Kazakhstan, averting more than 2 million of DALYs lost from diabetes and CVDs between 2008 and 2016 (see Table 4-1, Annex 4).



83. **With regards to value for money, the overall cost-benefit analysis of the Project showed a highly positive estimated internal return rate (IRR), and a very favorable ratio of costs per Healthy Years of Life gained (HYLG).** The gains were calculated as reduction in total days of morbidity and mortality multiplied by average annual salary in the country. The PAD describes both direct and indirect benefits arising from improving health services and strengthening health system. The same framework was used as an exit point in the economic and financial analysis. Gains were calculated for each year of Project implementation as compared to the baseline situation of 2008, the results are presented in table 4-3 (annex 4). The total HYLG has almost 7 times exceeded the projection of the gains at PAD stage, which has significantly improved cost-effectiveness ratio at US\$146.7 per HYLG. Based on the assumptions expressed in Table 4-2 of Annex 4, and with benefits accruing over a 9-year period of Project implementation, the results of economic analysis show a net present value (NPV) of US\$902.1 million, representing an internal return rate (IRR) of 5.8 times the investment of the Project.
84. **With regards to equity, the Project target was to decrease variations in financing allocation among regions of the country, improve guaranteed coverage, and strengthen primary care services.** The improvements in equity are not straightforward. Even though the Government is making effort to equalize financing allocations across regions adjusting for population sex-age group, climatic and geographic specifics of the regions, the equity in finance allocation and access remains questionable. Implementation of per capita allocations stimulated adequate financing of primary care, but deviations in actual per capita financing is still significant across regions. During the Project the share of out-of-pocket spending was growing from 28 percent of total spending on health in 2011 to 35 percent in 2015. At the same time, the Government has significantly increased financing of essential care at primary level, and only 6 percent of OOPs were spent to cover basic primary care and no OOPs contributing to financing of preventive care in 2015, which suggests lack of barriers for population to get essential health care. Available information on Gini indices in the country suggests slight improvements in the recent years (as presented in Table 4-4 of Annex 4).
85. **Besides the gains mentioned above, the Project, by supporting the Government's "Salamatty Kazakhstan" Health Strategy, accelerated adoption of international standards and building long-term institutional capacity in MOH and related healthcare institutions in support of key health reforms.** The Project has helped to establish new important structures in the Government, develop and implement standards regulating quality of care, eHealth, pharmaceutical and food policies. It has supported training of 95,546 people in Project-supported areas, created a critical mass of competent professionals able to lead further improvements in the next stage of the health sector development. The Project's financing was disbursed at the rate of 96 percent and implemented over the duration of the Project. Allocative efficiency of the Project (spending on right things) is significant given the impressive progress made in achieving Project outcomes.
86. **Implementation efficiency.** Project start up suffered from serious delays. The Project was ratified by Parliament on November 6, 2008 and became effective on December 15, 2008, 11 months after its approval by the Board on January 15, 2008. The international consultants started their work only in April 2010. The preparation of the twinning arrangements took significant time because of the MOH's unfamiliarity with Bank-financed projects and the lack of personnel available to undertake this task among their overwhelming routine work load. The first transfer from the loan was done as late as August 2009. Until that time neither the loan funds nor the GOK budget funds were available. In addition, the constant changes of the MOH personnel influenced to the delays. After the MTR in October 2011 significant progress was achieved in Project implementation. The Project closing date was extended by 30 months to accommodate delays and enable



completion of Project activities by December 31, 2015. Most of the Project components made substantial progress. Activities under four Project components were fully completed and activities under the component on pharmaceutical policy were mostly completed by December 31, 2015. At the same time implementation of the activities under Component D “Health Information System Development” experienced delay due to major changes in the national health information policy – approval of a new Concept for e-Health development. The second extension of the Project Closing Date by 18 months until June 30, 2017 was only done to complete activities under Component D. MOHMOH

87. **Rating:** The overall rating for efficiency is **Substantial**.

88. **Justification:** Based on the results of economic analysis the cost-effectiveness of the Project was High. The implementation efficiency was Modest as the Project experienced implementation delays and the four year extension. The overall Efficiency is rated Substantial as the Project fully achieved the PDOs and the only reasons for the extension were the significant delay with the Project start up due to one-year delay with the ratification of the Legal Agreement by the Parliament and delay with the completion of the activities under Component D on Health Information System Development. At the same time the extension of the Project Closing Date until June 30, 2017 was very much worth the effort as, at the end, the benefits from the activities supported under Component D justified the two-year extension.

#### **D. JUSTIFICATION OF OVERALL OUTCOME RATING**

89. The overall Outcome Rating is **Satisfactory** based on the **Substantial** relevance, efficacy and efficiency ratings.

#### **E. OTHER OUTCOMES AND IMPACTS (IF ANY)**

##### **Gender**

90. The Project had direct impact on gender aspects and social development. The clinical guidelines and protocols developed with Project support were mostly focused on priority health areas such as mother and child health, cardio-vascular diseases that are the main course of high premature mortality of men at working age.

##### **Institutional Strengthening**

91. The Project had a significant impact on institutional development and strengthening capacity in the sector, as discussed in detail above. New institutional framework, including over 17 technical centers, for adopting and adjusting new technologies and international standards to the local context and for their implementation was established. Intensive collaboration was developed between national institutions and leading international agencies (ISQua, ISPOR, HTAi, INHANTA, GIN, Codex Alimentarius Secretariat of FAO/WHO, etc.). More than 90,000 specialists of the MOH, MOE, MOF, Committee on Payment, Oblast Health Authorities, managers of health facilities and health professionals participated in the intensive training program within the country and abroad. Specialists of the MOH played a key role in preparing a major health financing reform – introduction of Social Health Insurance in Kazakhstan that demonstrate an institutional capacity built in the sector.

##### **Mobilizing Private Sector Financing**

92. The Strategy for PPP development in the health sector was prepared under Component A of the Project. The establishment of an accreditation system helped enhance the private healthcare facilities participation in the





provision of the State Guaranteed Benefit Package of services.

### Poverty Reduction and Shared Prosperity

93. Project achievements have impacted the overall population of the country, including vulnerable and poor groups. The Project RF did not include any indicator specifically related to poor groups of the population because this was not an explicit Project objective. However, the Project positively impacted the standardization, quality and access of the population to health care services. By doing that, the Project clearly has improved equity in health service delivery. In January 2015, capitation rate for PHC was significantly increased and equalized across oblasts. This was done, in part by the analyses done by the Center for Economic Research.

### Other Unintended Outcomes and Impacts

94. The adoption of food safety technical regulations developed for Kazakhstan for the use in the entire Customs Union was not an intended outcome, but became a welcome achievement.

## III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

### A. KEY FACTORS DURING PREPARATION

95. **Soundness of background analyses.** The Project was prepared by a large team of experts with financial support from the Government which allocated a budget for Project preparation through the Joint Economic Research Program (JERP).
96. The Project was subjected to the full scrutiny of a Feasibility Study, a government-required document for investment projects. The Feasibility Study was prepared by the MOH and reviewed/approved by the Ministries of Education, Justice, Finance and Economy and Budget Planning as part of the Government's due diligence process. The Feasibility Study included a detailed exposition of reform goals, project activities, implementation arrangements and term budget implications. Approval of the Feasibility Study led to the inclusion of all Project costs in the Government's medium-term budget plan: a tangible signal of the Government's commitment to the Project and its activities.
97. **Assessment of Project Design.** A number of alternatives were considered during Project preparation. The first alternative was *a small Project focused on a limited reform program*. Because of the Government's ambitions for sector-wide change, it would have been impossible to design a project around a single reform element and expect it to make a significant difference. This approach would also fail to fulfill the *raison d'être* of the Government's request for Bank involvement, namely assistance with the design, sequencing and oversight of complex reforms. Simplification of Project design might had been possible by excluding several standalone components and subcomponents, such as the Component F on Food Safety and WTO Accession and Subcomponent C2 on Medical Science Reform. This was rejected by the Government as these activities were crucial elements of the Government's reform program and ones for which international expertise and oversight are especially important.
98. Another alternative was a project financing exclusively hardware. The title of the Project, which was proposed by the Government of Kazakhstan (GoK), expresses its basic objective: to support institutional reform and technology transfer and thus to upgrade the quality of Kazakhstan's health system in selected critical areas.



This is not something that can be achieved by hardware alone. The Bank's role was to help build capacity in MOH and allied institutions attracting the world's best expertise for the introduction of internationally-acceptable standards. The lack of capacity and international experience would make it hard for Kazakhstani specialists to get the best out of international firms; as a result, less qualified firms would apply and the quality of work would be lower. This is why the Project includes a heavy emphasis on capacity-building and institutional development.

99. As designed, the Project supported the Government's National Health Care Reform and Development Program (2005–2010); all components constituted integral parts of the Program's second phase (2008–2010) and benefited from significant client ownership because the Project derived from the Government's reform program and sectoral goals. This strong synergy was continued under the two subsequent National Health Care Development Programs, "Salamatty Kazakhstan" for 2011–2015 and "Densauilyk" for 2016-2019, with all the Program areas developed taking the Project activities into account.
100. The design of the Project was rather complex and ambitious, it was based on condition of simultaneous implementation of many politically and technically complex institutional reforms. The redundant fragmentation of project components and subcomponents was emphasized in PAD and team discussed with the Government an opportunity to exclude some standalone activities. But that proposal was not accepted by the Government. The team understood the risks and carefully described them emphasizing the importance of flexibility in implementation, including the mid-course corrections. This posed a challenge for project implementation: to strike a balance between detailed project planning and flexibility in reacting to changing circumstances. The Project addressed this challenge in two ways. First, while the Project was designed each component left scope for in-process adjustments, e.g. by changing the physical location of reforms, their sequencing or even their content. This flexibility is a feature of Bank-financed projects that makes them especially useful for supporting complex reforms. Second, the Project supported a broad range of reforms but recognizes that some may proceed more smoothly or successfully than others, simply by virtue of the inherent unpredictability of complex change and the inability to predict reform trajectories with complete accuracy. The Project therefore spreads 'reform risk' across multiple fronts and allows for strength in one direction to compensate for weakness in another.
101. The design underlined twinning arrangements and training as an important condition of successful Project implementation. The difference of twinning arrangements from traditional consultancies is their duration, their preference for peer institutions over consulting firms and their bundling of related tasks (e.g. curriculum development, institutional re-design and training). Terms of Reference for twinning arrangements had to be prepared by the MOH and included in the Project Operational Manual. The use of a limited number of carefully-specified twinning relationships (as opposed to a large number of disparate consultancies) was also expected to facilitate implementation by simplifying Project management and improving the accountability of twinning partners as compared with the kind of task-shifting often seen when multiple firms/individuals are used.<sup>1</sup> The Bank took responsibility to closely monitor the performance of twinning partners and training

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<sup>1</sup> Twinning partners should be selected competitively based on criteria including the experience with policy reforms similar to those envisaged in Kazakhstan; their prior experience with peer-to-peer twinning relationships; their ability to prepare proposals for, and be held accountable against, clear, detailed and contractually binding implementation plans over an extended period, including explicit plans for monitoring and evaluation; and their own agency's level of accomplishment and/or performance against accepted international standards in the field.





activities to ensure they remain effective in delivering the envisaged levels of technology transfer and capacity building.

## **B. KEY FACTORS DURING IMPLEMENTATION**

102. **Project start up suffered from serious delays.** While the Project was approved by the Board on January 15, 2008, followed by signature of the Legal Agreement on February 2, 2008, there was the considerable delays in the ratification of the Loan Agreement by Parliament - November 6, 2008 and the Project became effective on December 15, 2008. The international consultants started their work only in April 2010 due to a number of reasons described below.
103. The preparation of the ToRs for the twinning arrangements started as early as in 2007, well before the signing of the loan agreement February 2, 2008. The process, however, took a lot of time, because from the side of MOH that time there was no good familiarity with Bank projects (e.g., that the TORs preparation is just the beginning of the procurement process), and no people were available to undertake this task among their overwhelming routine work load. This caused delays in the very early phase of the Project. The first WB loan transfer was done as late as in August 2009. Until that time neither the loan funds nor the GOK budget funds were available. This caused substantial delays in the Project implementation.
104. In addition, the constant changes of the MOH personnel influenced to the delays. Several institutional re-arrangements took place and four Ministers of Health, four Project Coordinators in MOH and altogether six directors of the DSD of MOH were working for the Project.
105. Delays caused also the fact that initially the PIST staffing was under-estimated with the proposal of eight people working in PIST and in the very starting phase only three. This was the result of delays in Project ratification and unavailability of money to hire the full team. Three initial people were hired thanks to USAID financial support. As soon as the Project started it became clear that PIST needed more human resources also because of the lack of experience in the WB procedures in MOH and low capacity to prepare ToRs and technical specifications. It should be noted that 12 Quality-Cost Based Selection (QCBS) shall be started simultaneously to select international twinning partners. Delays mostly related to long evaluation procedures by the MOH evaluation committees' members, changes in MOH staffing required changes in composition of the evaluation committees. Finally, PIST was staffed with 18 people, which was justified by the extensive scope of the Project activities.
106. Additional challenges brought the corruption case in MOH in September 2010 when the Minister of Health was charged with corruption. Although this was not related to the Project it influenced negatively on the Project, first of all, because the financial control bodies also started to investigate the Project documents, and this repeatedly required inputs from Project staff. Finally, the investigation process led to the certain reluctance among MOH staff to sign the documents on procurement. Due to the corruption case the MOH has gone through ten various investigations. Although nothing illegal was found, the investigation caused huge delays in the implementation. Disbursements slowed down significantly during about 1.5 years after the start of the corruption case.
107. For all these reasons the implementation of all Project Components was behind the schedule and the Project experienced difficulties to finalize all the activities by the initial closing date of the Project. Mid-term review



pointed out the need for Project restructuring to extend the Closing Date, add new activities towards the same PDO to deepen reforms and reallocate Project funds.

108. After the MTR significant progress was achieved in Project implementation. The MTR (October 2011) noted that the PDO as well as overall Project design, remained valid. As requested by the Bank management and agreed with the Government, the task team significantly revised key performance indicators in the Project RF to promote a more effective monitoring of progress towards PDO attainment. Most of the Project components made substantial progress. Four Project components were fully completed by December 31, 2015. The Project demonstrated notable achievements in the implementation of health sector reforms under most of its components. In particular, notable results were achieved in changing the mechanisms of paying health care organizations to stimulate efficient provision of good quality services, re-shaping the network of health facilities to better serve the needs of the population, developing processes to enhance relevance and quality of medical education, introducing modern processes and tools for ensuring food safety, and implementing mechanisms to improve quality of health services, such as clinical practice guidelines and annual accreditation of health facilities.
109. At the same time, delays occurred in implementing large contracts for component D (Health Information System Development). Implementation Progress was downgraded to Moderately Unsatisfactory from December 2014 till August 2015. Under this component, a complete change in approach to health information systems was undertaken – decentralized e-Health system development instead of an integrated / centralized HMIS. This was the result of a review of HMIS by the external MTR assessment. The e-Health Concept was approved by the government in April 2013. The re-bidding, delivery and testing of the IT packages required the second restructuring for a Closing Date extension of 18 months.
110. There was a deviation of actual disbursement of Project funds from the originally planned amount. The amount of US\$ 5,118,617 of the Bank financing and amount of US\$ 7,503,100 of Borrower financing were not disbursed. The major reason was depreciation of national currency – tenge. From the other side, depreciation of tenge allowed to implement larger number of activities that was originally planned.
111. Implementation of twinning arrangements model was one of the distinctive feature of the Project. It was challenging due to procurement guidelines limitations of the both sides – the Bank and the MOH. In spite of existing constraints the model did work for key Project components. As an example the contract with the Oxford Policy Management was multi-year, signed in April 2010 and closed in December 2015. During these years, a twinning arrangement did happen as such firms engaged and brought experts from similar agencies of other countries, and they worked closely with local counterparts building their capacity and feeling their own responsibility for their recommendations. The needed responsiveness to the counterparts specific needs came from (i) adaptation of the TA firms to counterparts' emerging high priorities by providing brief and focused pieces of analysis and recommendations on the requested issues / areas, and (ii) addenda to main contracts whereby the counterparts and TA firms could introduce some changes to planned deliverables both without changes to the contract budget (removing ones that became irrelevant and replacing them with emerging priorities) and by adding budgets to do additional activities.
112. Twinning arrangements (one per each of the twelve (sub)components) were the main vehicle to implement the Project whereby reputable international firms/agencies worked hand-in-hand with the MOH and its newly established technical institutions over an extended period of time transferring knowledge and building



institutional capacity. This modality effectively supported “learning by doing” through joint reviews of best international practice, tailoring of policy options most relevant to the Kazakhstan context and strategic priorities, formulating “blue prints” for implementation of the designed policies, and comprehensively addressing key capacity needs. Capacity building activities included in the international twinning partners' contracts (e.g., training of trainers) were supplemented with an array of the large scale of training activities planned based on the twinning partners' recommendations and included in the annually approved comprehensive Capacity Building Plan.

113. Bank and Government flexibility in addressing implementation issues was critical. Both the MOH and the Bank team demonstrated flexibility at various stages of implementation that allowed for adjustments to make better reflective of evolving needs and more closely aligned with the overall reform agenda.

#### **IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME**

##### **A. QUALITY OF MONITORING AND EVALUATION (M&E)**

###### **M&E Design**

114. The Project RF at design focused on individual components and their outputs/outcomes. It included six PDO indicators, one for each Component of the Project. The operational definitions of the PDO indicators were too complex in terms of the ability to monitor them correctly and they did not have qualitative targets. The RF included 55 intermediate outcome indicators to measure progress in achieving outputs/outcomes under each Project Component. Some of the intermediate indicators were too general and difficult to measure, some indicators were intended to measure outcomes that were beyond the scope of the Project, several indicators were not in compliance with the local regulation.
115. At the time of MTR in 2011 the team started the work to intensively revise the RF, to ensure a more effective monitoring of progress towards the attainment of PDO, and outcome and output indicators were refined. The design of the RF was substantially changed during the restructuring. The unmeasurable and irrelevant targets were removed. As a result, all PDO indicators and 46 intermediate indicators were dropped and replaced and eight intermediate indicators were revised. The number of the intermediate outcome indicators was reduced from 55 to 19 ensuring better targeting and better measurability of the progress toward the objectives.
116. Overall, the RF was deemed adequate for the remaining Project implementation period. At the same time, one of the six new PDO indicators (on financial protection) attempted to measure outcomes that were not fully dependent on the Project outputs. In particular, although the development and implementation of best international practices in health financing and service delivery areas was supposed to positively influence the financial protection of the population, this influence was not of a direct causal nature, but rather dependent on many exogenous factors, including the macroeconomic situation and the political will to implement reforms.

###### **M&E Implementation**

117. The MOH regularly collected data to track progress towards achieving the Project outcome indicators and



intermediate outcome indicators. The monitoring of Project outcomes has been carried out through a complex of household surveys and the development of National Health Accounts.

118. Several targets in the RF were significantly surpassed at the end of the Project. The overachievements of these indicators could be explained by the fact that not all reforms progressed at the same speed. The activities under the four Project components were in fact completed by the end of 2015 with achievement of correspondent indicators, but over the period of 2016-2017 these indicators were still monitored and the actual achieved targets are those at Project Closing Date.

### M&E Utilization

119. M&E was used under the Project not only as a management tool to evaluate the status of the implementation of activities, but also to inform policy makers to help prioritize activities to support the reform agenda and monitor the impact of policy reform on health sector performance in general.

### Justification of Overall Rating of Quality of M&E

120. Overall Rating of Quality of M&E: **Modest**

121. **Justification:** The RF enable the measurement of PDO achievements. At the same time the original Results Framework (RF) had deficiencies which made monitoring of the progress towards achievement of the PDOs time-consuming and challenging. In particular, all six PDO indicators included in the original RF did not have quantitative targets and were, thus, unmeasurable in practical terms; and the number of intermediate results indicators (55) was excessive. As a result, the RF was substantially revised at the Mid-Term Review, resulting in 6 new PDO indicators and 19 intermediate results indicators, which were diligently and timely measured and reported afterwards. Notwithstanding a better measurability of the new indicators, one of the six new PDO indicators (on financial protection) attempted to measure outcomes that were not fully dependent on the Project outputs.

## B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

122. **Environmental and social.** The Project was rated as a category C project because no construction or rehabilitation was envisioned; hence no environmental assessment was carried out for the Project as no environmental implications were envisaged.
123. **Procurement.** At the beginning of the Project the delays in procurement were related to the limited technical capacity of the MOH resulting in multiple rounds of revisions of complex technical documents, such as Terms of Reference (TORs) and Requests for Proposals (RFP) for the multi-year twinning arrangements contracts; limited initial staffing of Project Implementation Support Team (PIST) and MOH's unfamiliarity with WB procedures, especially with regard to the handling of large and complex procurement packages. Preparing of complex twinning arrangements required more time than planned.



124. The delays in procurement were also caused by the need for re-bidding two major interlinked IT contracts twice—Data Processing Centers and Interoperability Platform—because of a lack of fully responsive bids on one occasion and concerns about potential collusion among bidders on the second.
125. The PIST was staffed with experienced procurement specialists hired locally. The Bank’s procurement team organized several procurement workshops to explain the procurement rules and procedures to be applied during Project implementation.
126. **Financial Management.** The PIST carried out the financial management responsibilities in a satisfactory way. No issues in financial management were identified. Quarterly financial reports were prepared and submitted in a timely manner, providing reliable financial information. The financial statements were regularly audited by independent auditors, resulting in unqualified opinions. The PIST had appropriate skills and ability to manage the Project financial management and disbursement issues.

## **C. BANK PERFORMANCE**

### **Quality at Entry**

127. The Bank’s performance at entry was satisfactory.
128. The Project’s PDOs was fully aligned with and complemented the development priorities of the Government Health Care Reform Program. The organization, management and financing issues are addressed in the Project as a single set of interrelated tasks, which is undoubtedly a sign of a systemic approach in Project preparation. The Project design reflected on lessons learned from past projects.
129. The redundant fragmentation of Project components and subcomponents was emphasized in the PAD and the team discussed with the Government an opportunity to exclude some standalone activities. But that proposal was not accepted by the Government. The team understood the risks and carefully described them emphasizing the importance of flexibility in implementation, including the mid-course corrections. First, each component left scope for in-process adjustments, e.g. by changing the physical location of reforms, their sequencing or even (in some cases) their content. This flexibility is a feature of Bank-financed projects that makes them especially useful for supporting complex reforms. Second, the Project supported a broad range of reforms but recognizes that some may proceed more smoothly or successfully than others, simply by the inherent unpredictability of complex change and the inability to predict reform trajectories with complete accuracy. The Project therefore spreads ‘reform risk’ across multiple fronts and allows for strength in one direction to compensate for weakness in another.
130. Implementation arrangements for the Project components were clearly stipulated in the PAD. The importance of twinning arrangements and training as an important condition of successful Project implementation was emphasized.



### Quality of Supervision

131. The Bank's performance during Project implementation was satisfactory.
132. Sufficient budget and staff resources were allocated, and the Project was adequately supervised and monitored. Bank supervision took place on regular basis and provided appropriate and well-targeted advice and observations. The aide memoires provided evidence of regular supervision and professional advice given by the Bank's experts throughout the Project's lifetime. The Implementation Status Reports (ISRs) realistically rated the performance of the Project both in terms of achievement of development objectives and Project implementation. In addition, the feedback received by the ICR mission during the interviews with stakeholders, clearly show the government's appreciation of the technical skills and advice provided by the Bank's experts, not just on Project but also on health sector related issues.
133. The task team carried out a Mid-Term Review in October-November 2011 and conducted three Round Tables and one workshop with stakeholders that highlighted key issues to ensure the sustainability of the work started and helped to identify measures to overcome delays in Project implementation. As a result of the MTR a Project Restructuring was conducted to extend the Closing Date, revise the RF to better monitor the progress towards the achievement of PDO, add new activities, especially in the area of PHC development, and reallocate funds among Project components/subcomponents. After the MTR significant progress was achieved in Project implementation. The Project demonstrated notable achievements in the implementation of health sector reforms under most of its components. Activities of the four Project components were fully completed by the closing date of December 31, 2015. In August 2015 the Bank proposed the second Project Restructuring to extend the project Closing Date to complete activities under the Health Information System Development Component and Pharmaceutical Policy Reform Component.
134. The Bank team coordinated well with development partners active in the health sector in RK, such as WHO and USAID to ensure optimization of resources. Project supervision promoted strong coordination arrangements among all the government agencies participating in the Project, as well as international partners. The Bank provided effective and strong leadership to ensure consistent policy messages in health reform policy.

### Justification of Overall Rating of Bank Performance

135. Overall Rating of Bank Performance: **Satisfactory**. The Project was appropriately designed and implementation was actively supported.

## D. RISK TO DEVELOPMENT OUTCOME

136. The risk that Project development outcomes will not be maintained is **Moderate**. The Government (in both entities) has clearly demonstrated strong commitment in considering health as a priority sector (despite periods of economic crises) and continuously supported the health care reforms. In addition, it has shown commitment throughout the Project lifetime, aiming at achieving and maintaining its main outcomes.



## V. LESSONS AND RECOMMENDATIONS

137. **Government commitment is critical for the successful implementation and Bank Projects must be fully consistent with Government reform plans.** This is especially true of reforms that are technically and politically complex. The Project supported implementation of State Health Care Reform and Development Program for the years 2005-2010 and the subsequent State Health Development Programs of the RK “Salamatty Kazakhstan” (Healthy Kazakhstan) for the years 2011-2015 and “Densaulyk” for 2016-2019. All Project components have been integral parts of these Programs.
138. **Capacity building for reforms during Project implementation was cyclical in its nature, closely associated with the successive implementation of three government programs.** The capacity for reform implementation at the institutional level (technical centers) and individual level began to increase in the course of implementing of international standards under the framework of the first government program in 2008-2010. The strengthened capacity contributed to formulating the new reform program for 2011-2015 at a higher level and implementing new advanced standards and technologies. In turn, the implementation of this program helped to build new capacity, that have shaped the future vision of the reform program.
139. **Careful project management is critical for complex reform programs.** Attention to sequencing and detailed implementation planning is especially important for reform programs that consist of multiple interconnected activities. Ensuring adequate and continuous staffing is critical. Fully staffed project coordination units, responsible for overall project implementation, are crucial for successful completion of activities. If initial capacity for implementing complex reforms is limited, project design shall provide the realistic timeframe needed for capacity building.
140. **Project implementation proved that twinning arrangements are useful tools for strengthening capacities of local partners who need to acquire knowledge and experience from international developments and best practices.** For the successful twinning arrangements firstly, there is a need of very careful preparations to prevent misunderstandings and contractual disputes. The capacities in terms of expertise, approaches and expectations of the both sides should be studied and clarified in advance, well before signing the binding contract for the provision of services. Secondly, the contracts for twinning arrangements should allow much flexibility to address the emerging requirements of the client. In some cases it might be useful to formulate the collaboration agreement to take place in specific phases ensuring the quality of twinning collaboration and deliverables instead of deliverables only.
141. **There is a clear need to sustain the institutional capacity created under the Project beyond the completion of its activities.** In particular, this relates to the technical centers established under the Republican Center for Health Development. It will be important for the GoK to find a way to keep supporting the follow-up actions of the reforms introduced.
142. **More attention to monitoring and evaluation of progress in implementing new technologies and tools (e.g. clinical protocols) is needed.** It is important to further strengthen national capacity to evaluate the programs and its impact, conduct evaluation studies to document results and disseminate the achievements.





**ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS**

**A. RESULTS INDICATORS**

**A.1 PDO Indicators**

**Objective/Outcome:** Introduce international standards in the MoH and related health care institutions in support of key health sector reforms in the context of the State Health Care Reform and Development Program.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increased funding for Primary Health Care	Percentage	16.00	30.00		36.30
		31-Dec-2011	30-Jun-2017		31-Dec-2016

**Comments (achievements against targets):** Target surpassed (145%) =  $(36.3-16)/(30-16)$

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Improved financial risk protection as defined by reduced share of household health spending in total health expenditures	Percentage	32.90	30.00		35.30
		31-Dec-2010	30-Jun-2017		31-Dec-2016





**Comments (achievements against targets):** Not achieved.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Master plans for capital investments, developed based on international best practice, used as a basis for capital investment allocations in at least 4 oblasts	Number	0.00 31-Dec-2011	4.00 30-Jun-2017		16.00 31-Dec-2016

**Comments (achievements against targets):** Target surpassed (400%)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
At least two evidence-based disease management programs, which include incentives for health care providers and patients, developed and endorsed by the Ministry of Health	Number	0.00 31-Dec-2011	2.00 30-Jun-2017		3.00 09-Jun-2017

**Comments (achievements against targets):** Target surpassed (150%)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised	Actual Achieved at
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				Target	Completion
Number of public health facilities accredited by national accreditation body in accordance with international standards	Number	20.00	40.00		746.00
		31-Dec-2011	30-Jun-2017		09-Jun-2017
<b>Comments (achievements against targets):</b> Target surpassed (3630%) = (746-20)/(40-20)					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
ICT standards, which conform with international standards and include interoperability standards, are endorsed by Health ICT Regulatory Body and published	Text	No standards	20		20
		31-Dec-2011	30-Jun-2017		09-Jun-2017
<b>Comments (achievements against targets):</b> Achieved (100%)					

**Objective/Outcome:** Build long-term institutional capacity in the MoH and related healthcare institutions in support of key health sector reforms in the context of the State Health Care Reform and Development Program.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increased funding for Primary Health Care	Percentage	16.00	30.00		36.30
		31-Dec-2011	30-Jun-2017		31-Dec-2016



**Comments (achievements against targets):** Target surpassed (145%) = (36.3-16)/(30-16)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Improved financial risk protection as defined by reduced share of household health spending in total health expenditures	Percentage	32.90	30.00		35.30
		31-Dec-2010	30-Jun-2017		31-Dec-2016

**Comments (achievements against targets):** Not achieved.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Master plans for capital investments, developed based on international best practice, used as a basis for capital investment allocations in at least 4 oblasts	Number	0.00	4.00		16.00
		31-Dec-2011	30-Jun-2017		31-Dec-2016

**Comments (achievements against targets):** Target surpassed (400%)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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At least two evidence-based disease management programs, which include incentives for health care providers and patients, developed and endorsed by the Ministry of Health	Number	0.00 31-Dec-2011	2.00 30-Jun-2017		3.00 09-Jun-2017
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**Comments (achievements against targets):** Target surpassed (150%)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of public health facilities accredited by national accreditation body in accordance with international standards	Number	20.00 31-Dec-2011	40.00 30-Jun-2017		746.00 09-Jun-2017

**Comments (achievements against targets):** Target surpassed (3630%) =  $(746-20)/(40-20)$

**A.2 Intermediate Results Indicators**

**Component:** Component F: Food Safety and WTO Accession

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Legal and regulatory	Text	Recommendations on	HACCP system		Pilot implementation



documents related to post-processing food standards revised in accordance with international standards		revision of 26 food safety norms and rules, 25 technical regulations, and on amendments to the Law on Food Safety developed	implementation in food industry expanded		of HACCP system completed at 5 food industry enterprises in Karaganda oblast with project-supported technical assistance. As of October 1, 2015, HACCP system implemented in 268 food industry enterprises in line with Technical Regulation No.021/2011 of the Customs Union.
		31-Dec-2011	30-Jun-2017		09-Jun-2017

**Comments (achievements against targets):** Target achieved.

**Component:** Component G: Project Management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Project work plans, procurement plans, and budget produced and approved on an annual basis as described in the Project Operational Manual	Yes/No	Y 31-Dec-2011	Y 30-Jun-2017		Y 09-Jun-2017



**Comments (achievements against targets):** Target achieved.

**Component:** Component A: Health Financing and Management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increased capacity for health policy analysis (as measured by number of national analytical reports produced annually)	Number	0.00 31-Dec-2011	4.00 30-Jun-2017		7.00 09-Jun-2017

**Comments (achievements against targets):** Target surpassed (175%)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
NHA reports produced annually, disaggregated by national and sub-national levels, and disseminated among key stakeholders	Yes/No	Y 31-Dec-2011	Y 30-Jun-2017		Y 09-Jun-2017

**Comments (achievements against targets):** Target achieved.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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New network planning tools and new facility standards formally adopted by the Ministry of Health	Text	New hospital planning tools and standards developed  31-Dec-2011	New tools and standards for planning hospitals, laboratory and PHC facilities formally adopted  30-Jun-2017		New tools and standards for planning hospitals, laboratory and PHC facilities were formally adopted through the new state standard of health facility network (GoK decree #114 dated Feb.19, 2014).  09-Jun-2017
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**Comments (achievements against targets):** Target achieved (100%).

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Master plans for capital investments developed for 16 regions based on international best practice	Number	5.00 31-Dec-2011	16.00 30-Jun-2017		16.00 09-Jun-2017

**Comments (achievements against targets):** Target achieved (100%).

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Oblast-level health network	Number	0.00	4.00		16.00



master plans endorsed for at least 4 oblasts		31-Dec-2011	30-Jun-2017		09-Jun-2017
<b>Comments (achievements against targets):</b> Target surpassed (400%).					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Evidence-based incentives for providers in disease management programs implemented	Text	No evidence-based incentives for providers  31-Dec-2011	Optimized set of evidence-based incentives and pay-for-performance mechanisms for providers implemented  30-Jun-2017		Evidence-based incentives for providers have not been implemented. However, (i) disease management program implementation has been included among the mandatory requirements in the "Clinical Care" section of the 3rd edition of the accreditation standards for health facilities providing outpatient care.  09-Jun-2017

**Comments (achievements against targets):** Target not achieved.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised	Actual Achieved at
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				Target	Completion
Incentives introduced, including revision of co-payments, for patients to comply with diseases management programs	Text	No incentives for patients	Optimized set of incentives for patients implemented		Incentives for patients have not been implemented in full. However, non-financial incentives and mutual obligations have been implemented as part of the social contract between patients and providers in the pilot facilities for DMP.
		31-Dec-2011	30-Jun-2017		09-Jun-2017

**Comments (achievements against targets):** Target partially achieved.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Health facilities constructed, renovated, and/or equipped (number)	Number	160.00	2058.00		336.00
		31-Dec-2011	30-Jun-2017		09-Jun-2017

**Comments (achievements against targets):** Target not achieved (9%) =  $(336-160) / (2058-160)$

**Component:** Component B: Health Care Quality Improvement



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Criteria, procedures and standards for accreditation of health facilities developed, adopted and implemented in line with international practice	Text	Health facility accreditation standards developed	Accreditation criteria, procedures and standards renewed		National accreditation standards for inpatient care were certified by ISQua in 2012, and for outpatient care in 2013. Training program for surveyors was certified by ISQua in 2013. Accreditation standards for blood banks approved and for rehabilitation care developed in 2015. 3rd edition of accreditation standards for inpatient, outpatient, and emergency care renewed in 2015 and shared with ISQua for endorsement. A comprehensive external assessment of the Accreditation Center has been conducted for compliance against ISQua requirements to



		31-Dec-2011	30-Jun-2017		an independent accreditation body. 09-Jun-2017
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**Comments (achievements against targets):** Target achieved.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Evidence-based CPGs for selected disease management programs developed	Text	No CPGs for disease management programs  31-Dec-2011	CPGs for disease management programs implemented  30-Jun-2017		CPGs for three diseases (arterial hypertension, diabetes mellitus, and chronic heart failure) implemented in 7 pilot oblasts as part of disease management programs.  09-Jun-2017

**Comments (achievements against targets):** Target achieved.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increase in share of voluntary blood donations by 2015	Percentage	83.00 31-Dec-2011	88.00 30-Jun-2017		92.00 09-Jun-2017



**Comments (achievements against targets):** Target surpassed (180%) = (92-83)/(88-83)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Decrease in absolute number of paid donations by 2015	Number	38800.00	33400.00		20467.00
		31-Dec-2011	30-Jun-2017		09-Jun-2017

**Comments (achievements against targets):** Target surpassed (340%) = (38800-20467)/(38800-33400)

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Criteria, procedures and standards for accreditation of basic medical education programs developed, adopted and implemented in line with international practice	Text	No educational programs accredited	Educational programs for “General Medicine” of two medical universities accredited		National institutional accreditation was received by all 6 state medical universities. National accreditation of educational programs (specialized accreditation) was received by 5 medical universities (Astana Medical University, Karaganda State Medical University, Semey State Medical University, South-



		31-Dec-2011	30-Jun-2017		Kazakhstan State Pharmaceutical Academy, and Kazakh National Medical University). 09-Jun-2017
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Comments (achievements against targets): Target achieved.

Component: Component C: Reform of Medical Education and Medical Science

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Criteria, procedures and standards for accreditation of basic medical education programs developed, adopted and implemented in linewith international practice	Text	No educational programs accredited	Educational programs for "General Medicine" of two medical universities accredited		National institutional accreditation was received by all 6 state medical universities. National accreditation of educational programs (specialized accreditation) was received by 5 medical universities (Astana Medical University, Karaganda State Medical University, Semey State Medical University, South-Kazakhstan State



		31-Dec-2011	30-Jun-2017		Pharmaceutical Academy, and Kazakh National Medical University). 09-Jun-2017
<b>Comments (achievements against targets):</b> Target achieved.					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Health personnel receiving training (number)	Number	10720.00 31-Dec-2011	63066.00 30-Jun-2017		95546.00 31-Dec-2016
<b>Comments (achievements against targets):</b> Target surpassed (162%) = (95546-10720)/(95546-63066)					

**Component:** Component D: Health Information System Development

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
IT-infrastructure for deployment of UHMIS in selected oblasts developed by the Ministry of Health	Text	IT infrastructure developed in 140 health organizations	IT infrastructure developed in 2,000 health organizations		Akmola: 140 health facilities Karaganda: 150 health facilities Two republican-level data processing centers procured and



					<p>installed (in Astana and Akkol).</p> <p>Servers procured and installed in 4 health facilities piloting facility-based information systems (2 in Ust-Kamenogorsk, and 2 in Astana.</p> <p>Total: 296 health facilities</p> <p>The indicator was not achieved due to the change in approach: e-Health system with a few key central components and 4 pilot facilities was implemented with Project support instead of the Unified Health Information System. According to the decision of the MoHSD Board taken in 2015, IT equipment for all oblast-level health facilities shall</p>
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		31-Dec-2011	30-Jun-2017		be provided through respective local budgets; for this reason such investments were excluded from the Project scope.  09-Jun-2017
<b>Comments (achievements against targets):</b> Target not achieved (8%) = (296-140)/(2000-140)					

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Functional ICT standards in line with major international functional standards developed by Health ICT Regulatory Body	Text	No functional ICT standards	5 functional ICT standards		5 functional standards developed and approved: electronic health record, electronic medical record, e-referral, electronic disease prevention, and e-prescription.  In addition, in 2016, Provisional national standard "Collection of clinical and administrative data"





					was approved, and 6 international standards were translated into Kazakh and Russian languages as part of their registration with the registrar, with two of them adopted to have legal effect on the territory of the Republic of Kazakhstan.
		31-Dec-2011	30-Jun-2017		09-Jun-2017

**Comments (achievements against targets):** Target achieved (100%)

**Component:** Component E: Pharmaceutical Policy Reform

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Drug price reference system for drugs included in the National Formulary Book developed and adopted by the Ministry of Health	Text	Ceiling prices for drugs set	Reference drug prices refined based on implementation experience		Price-setting rules for drugs and medical supplies included in the State Guaranteed Free Health Care were approved through the MoHSD Order No.639



		31-Dec-2011	30-Jun-2017		dated July 30, 2015.
					09-Jun-2017

**Comments (achievements against targets):** Target achieved.

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**B. KEY OUTPUTS BY COMPONENT**

**Objective/Outcome 1: To introduce international standards in the MOH and related health care institutions in support of key health sector reforms in the context of the State Health Care Reform and Development Program.**

Outcome Indicators	<ol style="list-style-type: none"> <li>1. Increase in PHC funding;</li> <li>2. Improved financial risks protection as defined by reduced share of household health spending in total health expenditures;</li> <li>3. Master plans for capital investments, developed based on international best practice, used as a basis for capital investment allocations in at least 4 oblasts;</li> <li>4. At least two evidence-based disease management programs, which draw from international best practice and include incentives for health care providers and patients, developed and endorsed by the Ministry of Health;</li> <li>5. Number of public health facilities accredited by national accreditation body in accordance with international standards; and</li> <li>6. ICT standards corresponding to international standards and including standards of functional compatibility approved by regulatory body in the area of health ICT and published.</li> </ol>
Intermediate Results Indicators	<ol style="list-style-type: none"> <li>1. NHA reports produced annually, disaggregated by national and sub-national levels, and disseminated among key stakeholders;</li> <li>2. New network planning tools and new facility standards formally adopted by the Ministry of Health;</li> <li>3. Master plans for capital investments developed for 16 regions based on international best practice;</li> <li>4. Oblast-level health network master plans endorsed for at least 4 oblasts;</li> <li>5. Evidence-based incentives for providers in disease management programs implemented;</li> <li>6. Incentives introduced, including revision of co-payments, for patients to comply with diseases management programs;</li> <li>7. Criteria, procedures and standards for accreditation of health facilities developed, adopted and implemented in line with international practice;</li> <li>8. Evidence-based CPGs for selected disease management programs developed;</li> <li>9. Criteria, procedures and standards for accreditation of basic medical education programs developed, adopted and implemented in line with international practice;</li> </ol>



	<ol style="list-style-type: none"><li>10. Functional ICT standards in line with major international functional standards developed by Health ICT Regulatory Body;</li><li>11. Drug price reference system for drugs included in the National Formulary Book developed and adopted by the Ministry of Health;</li><li>12. Legal and regulatory documents related to post-processing food standards revised in accordance with international standards.</li></ol>
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	<p><b><i>Component A. Health Financing and Management</i></b></p> <ol style="list-style-type: none"><li>1. OECD SHA-based National Health Accounts institutionalized and produced annually since 2010, with disaggregation by national and sub-national levels starting with NHA report for 2013.</li><li>2. Regional financing equalization mechanisms adjusted for population sex-age group, climatic and geographic specifics of the regions.</li><li>3. Internationally accepted provider payment methods introduced: (DRGs for inpatient services, risk-adjusted capitation with performance-based component for PHC services, global budget for cancer services and rural healthcare).</li><li>4. Mechanisms to implement output-based program budgeting developed and implemented.</li><li>5. The State Guaranteed Benefits Package updated based on planning methods and criteria used in developed countries of Western Europe.</li><li>6. Recommendations and draft documents related to Social Health Insurance (SHI) implementation and development of Voluntary Health Insurance market adopted in respective laws and regulatory framework.</li><li>7. New professional standards for health managers based on the British professional standard, 18-month MBA in healthcare management with professional curriculum, and large-scale training program for health care managers developed and implemented.</li><li>8. New specialty “Health care manager” introduced in the classifier of specialties at Master’s level.</li><li>9. National standards for health facilities network planning upgraded to international standards and formally adopted; regional master plans covering hospital, PHC, and laboratory networks developed based on those standards for all 16 regions of Kazakhstan and formally adopted by regional authorities.</li><li>10. Recommendations to the Law on Public-Private Partnerships developed and adopted.</li><li>11. Project-supported amendments to the regulatory framework enabled changes in the legal status of health institutions from budget entities to more autonomously governed state enterprises.</li></ol>



***Component B. Health Care Quality Improvement***

12. National accreditation system established and formally endorsed by International Society for Quality in Healthcare (criteria, procedures, training program for accreditation experts/inspectors/trainers, and accreditation standards for inpatient care, outpatient, rehabilitation, and emergency care, laboratory services and blood centers updated in line with international requirements and approved by the MOH). 549 public and 197 private health facilities at the republican and oblast level accredited by the Accreditation Center since 2013 based on internationally recognized national accreditation standards. As a result, the attitude of health facility managers to quality issues, in general, and organization of clinical processes, in particular, has changed considerably.
13. National system for continuous development and review of evidence-based clinical practice guidelines with involvement of professional associations established, with 100 international-standard clinical guidelines (in five key clinical specialties) developed / adapted, providing the basis for developing 750 clinical protocols.
14. Health care delivery standards for 24 care profiles developed.
15. National Health Technology Assessment System created, with 14 full and 70 HTA mini HTA reports, and 500 examinations of high-tech medical services and 300 examinations of medicines prepared.
16. Evidence-Based Medicine units established in medical institutions of higher education.
17. Curricula on development of clinical guidelines/clinical protocols, HTA and evidence-based medicine developed and implemented.
18. Evidence-based disease management programs for three conditions developed, piloted in seven policlinics of two oblasts, and rolled out to additional five oblasts.
19. Strategic plan for progressive modernization of clinical diagnostic laboratory services, guidelines for a quality management / improvement system, and key performance indicators for monitoring and evaluation of laboratory services quality developed.
20. Plan to set up a National Reference Laboratory and subordinate expert laboratories for clinical diagnostic services, and a detailed Accreditation Plan for them to meet the international standard of quality management ISO15189 developed; 5 laboratories (one National Reference Laboratory in Astana and four subordinate expert laboratories in four oblasts) equipped to meet the international standard of quality management ISO15189.
21. External quality control function for the blood transfusion service established.
22. Scientific Production Center of Transfusiology prepared for international accreditation to meet requirements of international quality management system standard ISO17043.
23. With Project support, Kazakhstan's technical health institutions became a member of 5 international medical



agencies (ISQua, ISPOR, HTAi, INAHTA, GIN) that are the world leaders in health care quality improvement.

***Component C. Reform of Medical Education and Science***

24. Strategies in medical education and science area developed: (i) Concept for Development of Medical and Pharmaceutical Education for 2011-2015; (ii) Comprehensive Plan for Development of Human Resources for Health system for 2013-2016; (iii) Plan for Nursing Service Development till 2020; (iv) Concept for Medical Science Development till 2020; (v) Strategy for enhancing scientific and innovative capacity of health professionals of Kazakhstan until 2020 developed.
25. Conceptual bases of financing and management of medical education developed, including faculty development and introduction of innovative technologies in medical education.
26. All six public medical universities received institutional accreditation and entered the World Health Organization's World Directory of Medical Schools; national accreditation of educational programs (specialized accreditation) was received by 5 medical universities.
27. New approach to selection and admission of students to medical education institutions based on psychometric computer testing and Multiple Mini Interview technique developed and piloted.
28. New competencies-based educational curricula for "General Therapy" and "General Practitioner" (residency) specialties developed and implemented since September 1, 2016; "Trainer of medical educational organization" curriculum developed.
29. Applied Bachelor's degree program in Nursing designed and piloted in 6 medical colleges, with subsequent nationwide rollout.
30. Independent system for assessment of knowledge and skills established, with ongoing comprehensive testing of medical university graduates and practicing health professionals; 16 clinical simulation training centers equipped with virtual simulators established in six medical universities to develop and assess practical skills of graduates and practicing health professionals.
31. National system of planning and forecasting of health human resources established, based on an assessment of needs for planning and forecasting of health human resources for the period 2003-2013.
32. System of medical education quality assurance based on international standards of World Federation of Medical Education established.
33. Educational programs developed for dual-diploma Master's program with sub-specialization on "Methodology of biomedical research" and "Biostatistics".
34. All medical universities received more autonomy in institutional governance through the changes in their legal



status.

35. A number of guidelines developed to found the basis for revised state educational standard and model curricula for master's and doctoral studies of all disciplines.
36. Informational portal «Medical and pharmaceutical science in Kazakhstan» ([www.mednauka.kz](http://www.mednauka.kz)) launched in 3 languages (Kazakh, Russian, English) to improve research as the national platform for practical use of skills and research data in health policy making.
37. Independent system for review of health research programs established and ranking of scientific and medical educational institutions according the results of their scientific and innovation activities implemented.
38. Overall, this component, being one of the smallest budget-wise, achieved remarkable results in terms of the number of reforms introduced and their significance for building highly competent workforce to lead continuous improvements in the sector.

***Component D. Health Information System Development***

39. Review of design of the Unified Health Management Information System (former approach) conducted and recommendations provided for a shift in approach.
40. Concept of e-Health Development in Kazakhstan for 2013-2020 developed with Project support and is under implementation.
41. New e-Health architecture developed, with 18 basic e-Health standards developed / approved / published and 2 international standards adopted / registered / published.
42. The backbone of the e-Health system (two republican-level Data Processing Centers and Interoperability Platform) has been created, and the interoperability tests to be completed by December 2017 through the piloting of facility-based information systems in four different facilities (polyclinic, hospital, mother and child care center, and organ transplantation center).
43. IT infrastructure upgraded in Astana city and Akmola and Karaganda oblasts through the procurement of all necessary IT equipment.
44. Strategy for Development of Social Health Insurance Fund's Information System with a road map for its implementation developed.

***Component E: Pharmaceutical Policy Reform***

45. National Pharmaceutical Policy with implementation plan until 2020 developed.
46. Strategy for Development of Outpatient Drug Benefits System until 2020 with performance assessment



- indicators developed.
- 47. Republican Drug Formulary updated with removal of outdated drugs or those lacking evidence-based efficacy information in internationally recognized sources.
- 48. Kazakhstan National Drug Formulary developed based on the British National Formulary, with its web-based electronic version in Kazakh and Russian languages containing up-to-date, comprehensive and reliable information on over 640 generic drug names and about 2,000 brand names having evidence-based clinical efficacy.
- 49. Process for Kazakhstan’s membership in the international Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme initiated.
- 50. Drug Quality Testing laboratory of the Drug Expertise Center equipped and awarded full accreditation status under ISO 17025 standard requirements. The DEC’s physical and chemical testing laboratory received international accreditation from European Directorate for the Quality of Medicines and became an associate member of the OMCL/EDQM Network.

***Component F. Food Safety and WTO Accession***

- 51. Kazakhstan’s food safety regulations harmonized with requirements of WTO, FAO, and Codex Alimentarius, including 26 national technical regulations, 25 sanitary rules and norms, and the system of indicators of food products safety.
- 52. Hazard Analysis and Critical Control Points system (the monitoring system for identification and control of associated health hazards at food production, storage, and distribution stages) introduced in five enterprises of Karaganda region.

**Objective/Outcome 2: To build long-term institutional capacity in the MOH and related healthcare institutions in support of key health sector reforms in the context of the State Health Care Reform and Development Program.**

Outcome Indicators

- 1. Increase in PHC funding;
- 2. Improved financial risks protection as defined by reduced share of household health spendings in total health expenditures;
- 3. Master plans for capital investments, developed based on international best practice, used as a basis for capital investment allocations in at least 4 oblasts;
- 4. At least two evidence-based disease management programs, which draw from international best practice and





	<p>include incentives for health care providers and patients, developed and endorsed by the Ministry of Health;</p> <ol style="list-style-type: none"> <li>5. Number of public health facilities accredited by national accreditation body in accordance with international standards.</li> </ol>
<p>Intermediate Results Indicators</p>	<ol style="list-style-type: none"> <li>1. Increased capacity for health policy analysis (as measured by number of national analytical reports produced annually);</li> <li>2. Increase in share of voluntary blood donations by 2015;</li> <li>3. Decrease in absolute number of paid donations by 2015;</li> <li>4. IT-infrastructure for deployment of UHMIS in selected oblasts developed by the Ministry of Health;</li> <li>5. Health personnel receiving training;</li> <li>6. Health facilities constructed, renovated, and/or equipped.</li> </ol>
<p>Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)</p>	<p><b>Component A. Health Financing and Management</b></p> <ol style="list-style-type: none"> <li>1. Capacity of the health sector professionals and stakeholders to use internationally-accepted methods and modeling tools in health policy and financing significantly strengthened, with a total of 2,076 (including 146 abroad) officials and staff in MOH, Ministry of Economy, Ministry of Finance, and oblast administrations trained in modern principles of budget planning, allocation of health resources, monitoring sector expenditures, provider contracting, payment and performance.</li> <li>2. The MOH has acquired institutional capacity as well as the tools to carry out health policy analysis and development, set strategy and monitor its implementation and sector performance, through the National Health Accounts system, which has been institutionalized at the Center for Economic Research, annual production of health policy analysis reports, and a series of flagship courses on health system strengthening (health financing, health insurance, primary health care, and human resources for health) delivered to mid- to senior level managers and policy makers in the health sector under a contract with WHO.</li> <li>3. The improved capacity of the MOH, Ministry of Economy, Ministry of Finance, Committee for Purchasing of Medical Services and oblast administrations resulted in successful implementation of the important reforms in health financing area listed under the PDO1 section.</li> <li>4. Over 16,000 health specialists, including 78 abroad, trained to manage health institutions with more autonomy and apply new management technologies in various training activities, including MBA program in health management and short training courses.</li> <li>5. A total of 514 specialists (including 70 abroad) from the MOH, Center for Planning, Monitoring and Evaluation of</li> </ol>



Investment Projects, and at the regional level trained in investment planning issues in training courses, study tours, and through the "learning-by-doing" approach.

***Component B. Health Care Quality Improvement***

6. Over 160 trainers and 3,500 accreditation experts and inspectors trained in accreditation procedures and standards using a "trainer of trainers" approach based on training curriculum certified by ISQua.
7. Technical assistance provided to prepare the Accreditation Center (member of ISQua) to become an internationally accredited independent accreditation agency.
8. Over 3,000 specialists trained in developing clinical guidelines/clinical protocols, HTA and evidence-based medicine.
9. The Standardization Center has strengthened its capacity to provide technical & methodological support to the development, revision, quality evaluation, implementation, and monitoring of CPG; and an Expert Council (EC) established under the Project conducted independent external evaluation of the methodological quality of clinical guidelines and indicators.
10. Capacity of management and staff of the Standardization Center as well as of medical practitioners and clinical scientists strengthened through their involvement in HTA.
11. Training programs for training laboratory service specialists developed, and 180 specialists and 17 trainers trained on laboratory quality improvement.
12. 150 laboratory staff and managers of blood services as well as and policymakers trained through training and study tours. The staff of newly created Department for organization of external quality assessment of Scientific and Production Center of Blood Transfusion trained in basic provisions and structure of the ISO 17043 standard.
13. The Project also supported awareness building on voluntary donorship, leading to an increase in share of voluntary blood donations in total number of blood donations to 92% in 2016.
14. Around 8,000 specialists trained on healthcare quality issues.
15. The Accreditation Center and Center for Health Care Standardization became members of international healthcare quality agencies: ISQua, GIN, HTAi, INAHTA, ISPOR.

***Component C. Reform of Medical Education and Science***

16. The Republican Center for Knowledge and Skills Assessment (RCKSA) established and equipped with modern simulation training equipment. The Center received national accreditation and became a member of IAMRA and SESAM. Comprehensive testing of 3,680 internship graduates in 7 specialties of 8 medical universities and pilot



assessment of residency graduates of educational and research institutions of 2014-2015 academic year conducted and test base prepared for 38 specialties. Independent assessment of knowledge and skills of practitioners from four regions carried in priority areas of mother and child health and cardiovascular diseases.

17. National pool of 38 experts on medical education quality assurance trained.

18. A total of 695 people have been trained in various technical areas of medical education and science, including 211 specialists trained abroad.

***Component D. Health Information System Development***

19. A total of 19,352 specialists and administrators trained in e-Health design, implementation, and use.

***Component E. Pharmaceutical Policy Reform***

20. Drug Quality Testing laboratory of the Drug Expertise Center was equipped with modern laboratory equipment, and the second round of procurement for additional equipment will be completed by end-July 2017.

21. Over 40,000 people trained in various training activities (courses, workshops, study tours, etc.), including 78 trained abroad.

***Component F. Food Safety and WTO Accession***

22. Capacity of food safety control laboratories of 11 regional centers of sanitary-epidemiological expertise strengthened through the provision of modern laboratory and special equipment, and diagnostic tests.

23. Kazakhstan's membership in the Codex Alimentarius and other international organizations as well as establishment and functioning of Codex Alimentarius Inter-agency Coordination Council, Inter-agency Information Center on TBT / SPS Measures; and Central Asia Training Center on Food Safety supported.

24. The Central Asia Training Center on Food Safety/HACCP has seen substantial demand for capacity building from other countries and can be considered as a resource center for international standards and new technologies in food safety in the Central Asia region.

25. Around 2,400 food safety and laboratory specialists as well as food safety industry workers trained in food safety/HACCP issues, including 144 trained abroad.

26. Public awareness of food safety issues increased through the development of the Strategy for communication and social mobilization in food safety and its large-scale implementation at the regional level, with the use of informational and educational materials developed under the Project



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**ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION**

**A. TASK TEAM MEMBERS**

Name	Role
<b>Preparation</b>	
Peyvand Khaleghian	Task Team Leader, Senior Health Specialist
Dorothee Eckertz	Operations Officer
Baktybek Zhumadil	Senior Operations Officer
Dominic S. Haazen	Lead Health Policy Specialist
Tamer Samah Rabie	Lead Health Specialist
John C. Langenbrunner	Senior Economist
Jan Bultman	Lead Health Specialist
Naushad A. Khan	Lead Procurement Specialist
Norpulat Daniyarov	Financial Management Specialist
Rianna Lisa MOHammed-Roberts	Senior Health Specialist
Rekha Menon	Senior Economist
Asel Sargaldakova	Senior Health Specialist
Lindsay Sales	Health Management Consultant
Graham Dukes	Pharmaceuticals Consultant
Ainora Alzhanova	Program Assistant
Gabriel Francis	Program Assistant
Karthika Radhakrishnan-Nair	Program Assistant
Olga Fleshler	Program Assistant
Anara Tokusheva	Program Assistant
<b>Supervision/ICR</b>	
Carlos Marcelo Bortman	Task Team Leader, Lead Health Specialist
Baktybek Zhumadil	Senior Operations Officer
Nurbek Kurmanaliev, Alexander Balakov	Senior Procurement Specialists



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Aliya Kim	Financial Management Specialist
Volkan Cetinkaya	Senior Economist
Dominic S. Haazen	Lead Health Policy Specialist
Tamer Samah Rabie	Lead Health Specialist
Nedim Jaganjac	Senior Health Specialist
Son Nam Nguyen	Lead Health Specialist
John C. Langenbrunner	Senior Economist
Jan Bultman	Lead Health Specialist
John Otieno Ogallo	Senior Financial Management Specialist
Gabriel C. Francis	Program Assistant
Anara Akhmetova	Program Assistant
Zinaida Korableva	Program Assistant
Zhadyra Baibosynova	Program Assistant
Karthika Radhakrishnan-Nair	Program Assistant
Regina Nesiana	Program Assistant
Aigerim Aiguzhina	Program Assistant

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**B. STAFF TIME AND COST**

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
<b>Preparation</b>		
FY07	84.497	573,532.82
FY08	39.510	300,910.43
<b>Total</b>	<b>124.01</b>	<b>874,443.25</b>
<b>Supervision/ICR</b>		
FY08	27.952	95,422.86
FY09	54.643	191,019.64
FY10	59.120	199,888.11
FY11	60.626	207,923.41
FY12	35.644	187,463.19
FY13	28.740	155,599.47
FY14	68.920	299,613.01
FY15	50.071	227,370.02
FY16	21.922	122,224.37
FY17	26.587	122,405.29
FY18	9.081	30,499.65
<b>Total</b>	<b>443.31</b>	<b>1,839,429.02</b>



**ANNEX 3. PROJECT COST BY COMPONENT**

<b>Components</b>	<b>Amount at Approval (US\$M)</b>	<b>Actual at Project Closing (US\$M)</b>	<b>Percentage of Approval (US\$M)</b>
Component A: Health Financing and Management	21.06	26.65	6.81
Component B: Health Care Quality Improvement	59.94	26.49	20.27
Component C: Reform of Medical Education and Medical Science	9.47	13.03	3.20
Component D: Health Information System Development	188.64	114.19	63.78
Component E: Pharmaceutical Policy Reform	4.28	23.97	1.45
Component F: Food Safety and WTO Accession	8.73	7.14	2.95
Component G: Project Management	4.58	7.84	1.55
<b>Total</b>	<b>296.70</b>	<b>219.31</b>	<b>100.01</b>





## ANNEX 4. EFFICIENCY ANALYSIS

### Methodology to Assess the Project Efficiency

- 1. The economic analysis in the Project Appraisal Document (PAD) was presented in Annex 9.** It comprised sections explaining macroeconomic context and health expenditures context, highlighting growing share of public health expenditure and dominating role of non-communicable diseases in the health profile of the country. The expected impact of the Project was estimated using changes in mortality and morbidity rates using Healthy Years of Life Gained (HYLG), and from cost savings as a result of five potential impacts: (a) Savings in the current expenditure of hospitals stemming from restructuring and the shift to more cost-effective services (e.g. from in-patient care to primary/outpatient care); (b) Healthcare facility mergers, reducing costs of staff and utilities; (c) Hospital expenditure savings from reductions in average cost and length of stay for inpatient care; (d) Consumer-level savings from free or subsidized medicine or the purchase of less expensive pharmaceuticals; and (e) Improved productivity as a result of less hospitalization and more work days on the job.
- 2. The proposed analysis in the PAD was the cost-effectiveness analysis, which highlighted the cumulative saving of hospitals, consumer savings to free and subsidized medicines, and cost-effectiveness of the HLYG accumulated during the Project at \$2,049.3 per HLYG<sup>2</sup>.** The timeframe for the economic analysis was from 2008 to 2017. The estimated internal rate of return (IRR) was 31.3 percent (in the pessimistic scenario with a moderate decrease in mortality and morbidity and a higher discount rate at 10 percent IRR was estimated at 23.6 percent). The estimated “breakeven” or payback period was five years.
- 3. During implementation, the Project investments were spent in seven components.** These components included: (1) Component A: Health Financing and Management (US\$20.20 million); (2) Component B: Health Care Quality Improvement (US\$59.90 million); (3) Component C: Reform of Medical Education and Medical Science (US\$9.40 million); (4) Component D: Health Information System Development (US\$188.60 million); (5) Component E: Pharmaceutical Policy Reform (US\$4.20 million); (6) Component F: Food Safety and WTO Accession (US\$8.70 million); and (7) Component G: Project Management (US\$4.60 million). The activities within components were supposed to generate direct (such as reduction of illness and improvement of wellbeing) through: (i) improved efficiency and effectiveness of health service delivery, (ii) early detection, better treatment and fewer complications for basic medical and hospital care, (iii) availability of safer blood and blood products for faster, more effective treatment, (iv) Improved efficiency and effectiveness of healthcare management and service delivery with real-time information and tools for patient care and facility management, (v) improved access and equity of pharmaceutical use, and (vi) improved

<sup>2</sup> In the original version of the PAD the \$16 per HLYG is cited, however the examination of calculations showed the mistake, as the costs in tenge were converted in US\$ two times (erroneously denominating the already converted costs in US\$ applying exchange rate of KZT/USD = 128 valid at the time of PAD writing). This mistake did not affect other calculations in the PAD.



food safety. Considering the Project commitment to improve equity in health care access, part of the efficiency analysis will evaluate the equity dimensions of the Project investments. This annex will discuss the Project efficiency in four dimensions: (a) *technical efficiency*<sup>3</sup>; (b) *allocative efficiency*<sup>4</sup>; (c) *cost-benefits analysis*; and, (d) *equity analysis*. All tables and graphics associated with the analysis are at the end of the annex.

### Technical efficiency

- 4. Technical efficiency achieved by the Project is substantial. The program financed activities that contributed to improve the service delivery and achieve significant reductions in overall mortality.** These services increased the access to skilled maternal and obstetric care coverage, child/infant health and adult health among other benefits. It has contributed to substantial improvements in health outcomes. Figure 4-1 shows significant decrease in mortality rates, specifically in CVD-related deaths, between 2008-2016, which can be attributed to improvement in supplying services such as antenatal and obstetric care, skilled birth, integrated management of childhood illnesses, improved management of NCDs with support from eHealth technologies, including routine screening for NCDs such as hypertension, diabetes, and chronic heart failure, implementation of evidence-based guidelines for improved preventive and treatment approaches, safe blood transfusion and safer food. During the Project implementation period, more than two-fold decrease in infant mortality rate was registered from 20.76 in 2008 to 8.58 deaths per 1,000 livebirths. Consequently, *coverage and quality of health services for population were substantially improved*. Services such as intensive acute care for patients has improved (e.g. the number of cardiac surgeries has increased from 7,000 to 70,000 operations per year), contributing to reduction of the risk of mortality. Other improved indicators, such as vaccination coverage and reductions in vaccine-preventable diseases reflect substantial gains in the technical efficiency on service delivery.

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<sup>3</sup>Technical efficiency is the effectiveness with which a given set of inputs is used to produce an output. Technical efficiency in health increases when a set of integrated health services are produced with less input costs. It comprises scale economies brought by increased coverage and integrated healthcare management.

<sup>4</sup> Allocative efficiency occurs when there is an optimal distribution of goods and services, considering consumer's needs, meaning spending on the right things. This concept applies to public health investments, when the budgetary allocation per capita for a set of health services equals the marginal costs of production of these target health services. This happens when the government budget spent is lower or equivalent to the marginal utility got by the beneficiaries. Therefore, the optimal distribution is achieved when the marginal utility of the good equals or is bigger than the marginal cost.

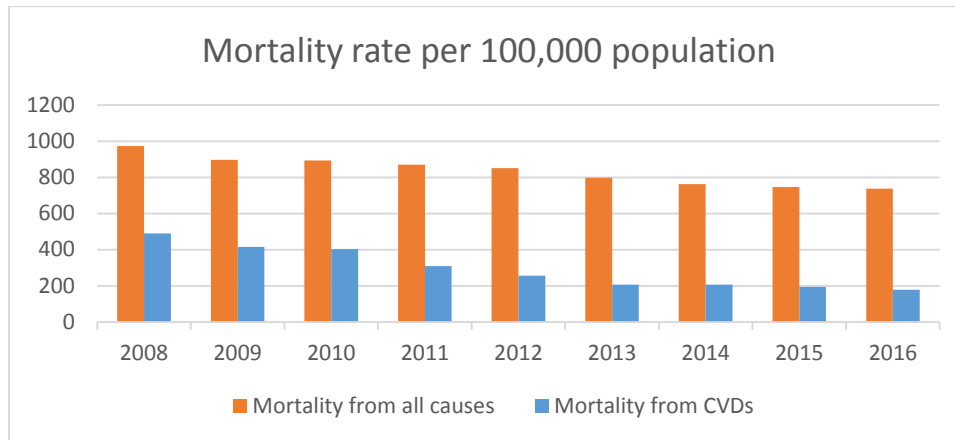


Figure 4-1 Decrease of mortality rates in Kazakhstan in 2008-2016. Source: Medical statistics, <http://medinfo.kz/#/stats>

- 5. The improvements in supply and services coverage together with modernization of service delivery was effectively driven by investments in medical equipment, eHealth technologies, and human resources provided by the Program.** The total public health budget was increasing in nominal terms during the Project life, however crisis of 2014-2016 and denomination of local currency resulted in the reduction of the share of public expenditures as GDP percent from 2.7 in 2010 to 2.2 in 2015. On the supply side, the Program’s effectiveness was achieved by strengthening primary and outpatient care, including by allocating increased proportion of total financing for treatment to these services (e.g. from 19 percent in 2011 to 30 percent in 2016), investing in medical equipment, eHealth technologies (IT infrastructure developed in 2,000 health organizations), and better trained personnel at district levels. Primary care facilities acquired new staff positions – social workers, psychologists, second and third nurse, and number of general practitioners increased by 30 percent. The NCD management programs helped achieve cost savings by improving the quality of care for chronic diseases along with the implementation of optimized set of evidence-based incentives and pay-for-performance mechanisms for providers.
- 6. The quality of care was continuously improved by scaling accreditation of health facilities, implementation of HTA, and training of medical personnel.** The number public and private health facilities accredited with international standards reached 549 and 197 respectively in 2016 from only 20 health facilities accredited in 2011. Health status gained from the Project investments contributed to social well-being through its impact on economic development and productivity. Evidence-Based Medicine units were established in medical institutions of higher education. Curricula on development of clinical guidelines/clinical protocols, HTA and evidence-based medicine had been developed and implemented. A total of 100 international-standard clinical guidelines (in five key clinical specialties) developed / adapted, providing the basis for developing 750 clinical protocols. Health care delivery standards for 24 care profiles developed. During Project implementation, 14 full and 70 mini HTA reports, and 500 examinations of high-tech medical services and 300 examinations of medicines prepared. Training activities strengthened quality of care, use of evidence-based approaches, and the link between outputs and outcomes. A total of



95,546 people trained in the Project-supported areas, created a critical mass of competent professionals able to lead further improvements in the next stage of the health sector development.

- 7. The Project helped optimize hospital sector.** The Project supported development of 16 oblast master plans for hospital network optimization. Based on recommendations of oblast-level master plans, regional Prospective Plans for Development Health Facility Network for 2015-2025 were developed and approved by local authorities of all 16 regions. Hospital sector still has overcapacities compared to OECD countries. However, optimization of hospital network supported with the resources of the Project helped decrease the number of hospital beds in recent years and reduce the length of stay on the hospital bed from 12.5 day in 2008 to 10.3 days, inducing shift to day care services and outpatient care. Implementation of DRGs incentivized development of advanced technologies, especially in organ transplantation in cardio-surgery fields.

### Allocative efficiency

- 8. Allocative efficiency of the program (spending on right things) is substantial, given better budget allocations on health priorities, generating impressive progress in achieving the Program outcomes with reduction of DALYs with the amount of resources spent.** The Project reduced the Burden of Diseases (BoD) targeted by the Program. An indirect way to create evidence on this is comparing the estimation of the BoD, in terms of DALY losses between 2008 and 2016<sup>5</sup>. Considering this, the Project target interventions on diabetes, hypertension and chronic heart failure had an estimated benefit of over 2 million of DALY averted along the Project life. The Program contributed to a reduction of DALYs attributed to diabetes from 1,463.2 per 100,000 in 2008 to 1,280.8 in 2006 (or 12.5 percent), and to CVDs from 10,731.5 in 2008 to 7,812.6 in 2016 (or 37.4 percent). Table 4-1 shows the DALYs averted from 2008 and 2016 if compared with the baseline of 2008 in the selected diseases.

**Table 4-1: DALYs Averted in CVDs and Diabetes with Project**

Year/DALYs	CVDs	averted DALY losses from CVDs	Diabetes	averted DALY losses from diabetes
2008	1,714,183.28	-	233,729.33	-
2009	1,617,767.36	96,415.92	229,464.17	4,265.17
2010	1,561,583.87	152,599.41	227,578.40	6,150.93
2011	1,521,219.37	192,963.90	225,933.66	7,795.68
2012	1,480,164.58	234,018.70	225,501.42	8,227.92
2013	1,435,093.75	279,089.52	223,954.25	9,775.09
2014	1,385,212.12	328,971.16	223,073.74	10,655.60
2015	1,362,124.51	352,058.77	223,586.85	10,142.48
2016	1,395,947.47	318,235.81	228,854.29	4,875.04
<b>Total</b>	<b>13,473,296.30</b>	<b>1,954,353.20</b>	<b>1,807,946.77</b>	<b>61,887.91</b>

Source: GBD 2016

<sup>5</sup> Data from the Global Burden of Disease Study 2016 (GBD 2016) Results. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2016. Available from from <https://http://vizhub.healthdata.org/gbd-compare/>.



- 9. The health interventions supported by the program were prioritized based on the international evidence of their effectiveness.** The Project supported implementation of evidence-based medicine and implementation of interventions that were based on international evidence through adaptation and evidence-based guidelines and health technology assessment. The country is having a high NCD burden, therefore implementation of preventing and treatment interventions to address key diseases helped achieve health gains. The program that was focused on strengthening primary care level interventions is a widely-recognized approach to improve universal health coverage while sustaining health care expenditures.
- 10. To improve the allocative efficiency of the interventions at the primary level, the government has developed and implemented performance-based financing.** The implementation has started by inclusion of: (i) process indicators in the incentive-based component of the PHC capitation rate, and (ii) disease management program implementation as one of mandatory requirements for accreditation of health facilities providing outpatient care. By the end of the Project an optimized set of evidence-based incentives and pay-for-performance mechanisms for providers has been implemented. The Project has also supported alignment between the regions in PHC financing with an increase in the tariff per 1 inhabitant (from 169 to 486 tenge), and introduction of comprehensive capitation with stimulating component (partial fund holding).
- 11. Another contribution of the Project towards improved allocative efficiency was brought by investing in eHealth development.** The program supported improvement in medical data exchange system by implementation of 20 basic ICT standards, which conform with international standards and include interoperability standards, establishment of two republican-level Data Processing Centers and Interoperability Platform, upgrades IT infrastructure in Astana city, Akmola and Karaganda regions. Besides, there was focus on areas such as health staff training, management improvement, and efficient drugs supply chain management and equipment maintenance which increased the availability, quality and access of the essential health services delivery in public health facilities. These innovations support clinic decision making by providing access to key information on health of each patient for health professionals, reduction of duplications of procedures and data entry, and gradual transition to paperless work process.
- 12. Technical and allocative efficiency also improved after the Project restructuring.** The 2012 restructuring included (i) an extension of the original Loan closing date by 30 months (from June 30, 2013 to December 31, 2015) to correspond with the duration of the Government's "Salamatty Kazakhstan" Health Strategy until December 2015; (ii) cancellation of activities that became outdated or irrelevant, and adding activities that supported newly identified priorities; and (iii) reallocation of funds among sub-components within the remaining Loan and Government proceeds (US\$139 million or 47 percent of the US\$296.1 million in total project costs) to support implementation of a number of health sector reforms developed under the Project and ready to be implemented. A second Level 2 restructuring took place in August 2015 and included (i) another extension of the Closing Date to June 30, 2017 to complete key activities under the Health



Information System Development component as part of the newly implemented e-Health Development Concept, and a few additional activities under the Pharmaceutical Policy Reform component; and (ii) a partial cancelation of Loan proceeds in the amount of US\$ 26,983.07 from the Operating Costs category requested by the Ministry of Finance due to savings in that category

**Project Cost-Effectiveness and Cost-Benefit Analysis**

**13. The Program benefit was measured by a cost-effectiveness analysis, considering the impact of the Program on health outcomes, and increase in productivity due to fewer days lost from illness.** The gains were calculated as reduction in total years of morbidity and mortality multiplied by average annual salary in the country. The PAD described both direct and indirect benefits arising from improving health services and strengthening health systems. The same framework is used in this ICR’s economic and financial analysis. This section of this annex presents the ex post economic evaluation of the Project. Internal rate of return (IRR) and net present value (NPV) were estimated.

**14. Cost-benefit considerations.** Similar methodological approaches and indicators were considered in both ex ante and ex post assessments. Table 4-2 presents the total sector program costs considered by this economic analysis. The cost of implementation of the Project had two elements: (i) the GOK’s contribution and (ii) IBRD contribution. The total Program cost was estimated at US\$311.9 million over five years in the PAD. This economic analysis used the updated actual Program’s total cost estimated from the total disbursed funds under the Project and contributions of the Government.

**Table 4-2: Returns of investment and cost-benefit analysis of the Project**

Years	Project cost (US\$)	Government contribution, in US\$	Total spending discounted at 8%	Average salary per year, US\$	Total HLYG in the working age group (within project timeframe)	Gains from HLYG in US\$	HLYG gains discounted at 8%	Net flow, US\$
2009	2,778,728	6,274,500	9,053,228	5,472	9,187	65,827,905	65,827,905	56,774,677
2010	16,947,649	6,982,500	22,157,546	6,324	18,485	116,901,454	108,242,087	87,096,149
2011	7,455,064	7,243,800	12,601,906	7,368	21,269	156,709,281	134,352,950	124,274,049
2012	17,094,462	18,782,300	28,480,130	8,148	26,344	214,650,083	170,396,157	146,738,277
2013	8,298,993	16,983,000	18,583,020	8,604	35,490	305,357,215	224,446,669	214,372,537
2014	5,632,050	13,711,000	13,164,555	8,100	46,872	379,659,818	258,390,093	257,527,649
2015	7,527,962	12,088,300	12,361,573	6,816	54,086	368,653,345	232,314,141	233,287,717
2016	30,419,461	9,455,700	23,266,773	5,016	58,181	291,833,816	170,282,229	158,472,660
2017	16,400,031	15,232,700	17,090,180	5,016	59,698	299,443,624	161,780,073	157,188,735
<b>Total</b>	<b>112,554,400</b>	<b>106,753,800</b>	<b>156,758,911</b>	-	<b>329,612</b>	<b>2,199,036,541</b>	<b>1,526,032,302</b>	<b>2,086,811,753</b>
							<b>NPV (8%)</b>	<b>902,125,266</b>

**15. Direct and indirect benefit.** This was computed as reduced morbidity and mortality translated into Healthy Years of Life Gained (HLYG) during Project implementation. HLYG were calculated from: (i) reduction in premature deaths (direct benefit), and (ii) reduction of temporary disability from



decrease in hospitalizations of patients (indirect benefit). Gains were calculated for each year of Project implementation as compared to the baseline situation of 2008, the results are presented in table 4-3. The total HYLG has almost 7 times exceeded the projection of the gains at PAD stage, which has significantly improved cost-effectiveness ratio at \$146.7 per HYLG. Expenditure data was derived from the Kazakhstan National Health Accounts reports and additional data requests to the Government. The savings in expenditures did not include calculations of the total number of cases of treatment averted multiplied by the cost of treatment. The gains were calculated as the reduction in the total years of morbidity and/or mortality multiplied by the average per capita GDP.

**Table 4-3: Healthy Years of Life Gained with Project**

Years	Total HYLG projected in the PAD	Re-estimated Morbidity Years	Re-estimated Mortality Years	Re-estimated Total HYLG
2008	0,0	0.0	0.0	0.0
2009	14 963,8	8,902.6	26,408.8	35,311.4
2010	18 704,8	17,055.3	37,879.1	54,934.5
2011	24 316,2	18,924.0	66,122.5	85,046.5
2012	31 798,1	22,956.8	107,986.4	130,943.2
2013	29 927,7	27,900.5	150,686.3	178,586.8
2014	20 575,3	32,468.8	128,229.6	160,698.4
2015	16 834,3	34,225.1	115,390.0	149,615.1
2016	14 963,8	34,921.3	108,665.3	143,586.6
2017	13 093,4	34,921.3	95,082.1	130,003.4
Total	185 177,4	232,275.9	836,450.1	1,068,725.9
Discounted at 4 percent	134 121,7	148,755.1	558,234.8	706,989.9
Discounted at 7 percent	126 909,4	147,980.7	536,287.7	684,268.4
Discounted at 10 percent	109 471,7	124,001.9	449,932.0	573,933.9
Percent of total	100,0			
<b>Cost-effectiveness (\$/HYLG)</b>	<b>\$2,049.30</b>			<b>\$146.70</b>

**16. The Project would grant high economic return.** Based on the assumptions expressed in Table 4.4, and with benefits accruing over a 9-year period, the results of economic analysis are estimating a net present value (NPV) of US\$902.1 million, representing and internal return rate (IRR) of 5.8 times the investment of the Project.

### Equity Analysis

**17. Methodology for the equity analysis.** The equity analysis is focused on the access to services and improvement of state financial guarantees for service provision across geographic regions. It did not evaluate the trends associated with catastrophic expenditures due to limited data for this analysis during the Project life, but analyzed out-of-pocket (OOP) spending. The analysis considered how the equity was improved between 2008 and 2016 in variables such as: (a) equalization of financing volumes across regions; (b) out-of-pocket spending of households. The analysis also included review of changes in Gini coefficient within Project timeline.

**18. Despite major improvements in health financing system, there are important variations in per capita financing across regions.** According to the 2016 NHA report, per capita financing of hospital





and primary care differs two-fold across different regions. Even though the Government is making effort to equalize financing allocations across regions adjusting for population sex-age group, climatic and geographic specifics of the regions, the equity in finance allocation and access remains questionable. Implementation of per capita allocations stimulated adequate financing of primary care, but deviations in actual per capita financing is still significant (e.g. public per capita spending for outpatient care in 2015 was 19,608 tenge, compared to just 9,410 in Almaty city or 12,081 in Pavlograd region).

**19. Despite implementation of cost-effective technologies and interventions in the health sector, and continued increase in public financing of the health sector, OOPs are growing.** Figure 4-2 shows the growing share of OOPs in the financing of health care. Although the 2016 NHA report explains that the most part of OOPs is registered in two big cities of Almaty and Astana, which can probably be explained by better incomes and purchasing power of city residents. Most part of OOPs (37 percent) is channeled to cover expenses on medications, almost quarter (26 percent) on dentistry services, and one sixth (15 percent) to finance hospital care. Only 6 percent of OOPs were spent to cover basic primary care and no OOPs contributing to financing of preventive care in 2015, which suggests lack of barriers for population to get essential health care.

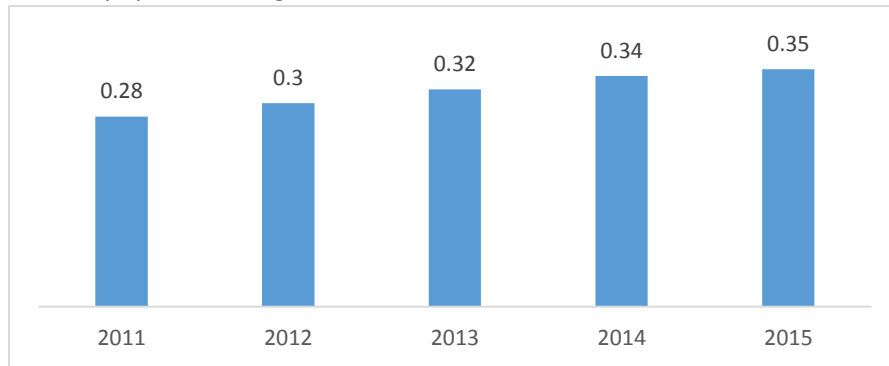


Figure 4-2 Share of out-of-pocket spending of households in total health expenditures. Source: NHA 2016.

**20. Available information on Gini Coefficients in the country suggests slight improvements in the recent years.** The value for GINI index (World Bank estimate) in Kazakhstan was 26.5 as of 2015. Table 4-4 shows small reductions<sup>6</sup> in the overall Gini index in the country. Only generic indices are available.

Table 4-4: Changes in Gini index during Project implementation

Year	2008	2009	2010	2011	2012	2013	2014	2015
Gini index value	29.07	28.79	28.56	27.42	27.43	26.35	26.5	26.5

**21. Summing up the evidence, efforts were made to improve equity in providing access to health care for population in Kazakhstan.** The evidence is based on the summary NHA reports of 2016 and previous years, which report inequality of per capita public financing across regions of the country

<sup>6</sup> Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality





and growth in out-of-pocket contributions of households, mainly for medications, and dental services. However, accessibility of essential care is protected by state guarantees, small OOPs for primary care, and improvements in overall Gini coefficient for the country in recent years.

### **Final Considerations**

**The present economic analysis demonstrated that the Project provided gains on efficiency (technical and allocative) and made efforts to improve equity.** The technical efficiency (effectiveness) was achieved by increases in the utilization of cost-effective health care services. The Program allocative efficiency led to important reductions in the targeted BoD in Kazakhstan, averting at least 2 million of DALYs lost between 2008-2016 in target diseases for Project interventions (CVDs and diabetes). With regards to value for money, the Program added value by increasing access and utilization of outpatient health services and some optimization in hospital care. The overall cost-benefit analysis of the Program showed an estimated positive NPV of about US\$902.1 million, representing an internal return rate (IRR) of 5.8 times the investment of the Project. Efficient program interventions contributed to reducing overall mortality, including maternal and infant mortality, decreasing temporary disabilities related to in-patient stay, altogether generating 7-times more HYLG in benefits compared to initial projections of the PAD, and improving cost-effectiveness ratio to \$146.7 per HYLG.



ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ  
ДЕНСАУЛЫҚ САҚТАУ  
МИНИСТЕЛІГІ



МИНИСТЕРСТВО  
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25.12.17г.

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Казахстан»,  
г-ну М. Бортман

Уважаемый г-н Бортман,

Министерство здравоохранения Республики Казахстан (далее – Министерство) рассмотрело предоставленный командой Всемирного Банка отчет о завершении реализации и результатах проекта «Передача технологий и проведение институциональной реформы в секторе здравоохранения Республики Казахстан» (далее – Проект).

Министерство согласно с приведенными в отчете оценками различных показателей Проекта, так:

- общая оценка затратной эффективности является высокой;
- эффективность по целям реализации проекта оценена как существенная.

Отчетом также отмечено, что проект обеспечил рост эффективности распределения ресурсов и способствовал повышению справедливости (равенства) распределения. Техническая эффективность была достигнута за счет увеличения использования экономически эффективных медицинских услуг. Эффективность распределения ресурсов в рамках Программы привела к значительному снижению уровня заболеваемости в Казахстане, предотвращая минимум 2 миллиона DALY с 2008 по 2016 г. среди заболеваний в рамках мероприятий проекта (сердечно-сосудистые заболевания и диабет).

В свою очередь, Министерство хочет отметить, что в рамках Проекта обеспечено выполнение двух основных целей: институциональная реформа отрасли здравоохранения в разрезе 6 направлений проекта; трансфер наилучшего международного опыта, знаний и стандартов.

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Министерство выражает свою благодарность Вам и команде Всемирного Банка за помощь и поддержку в реализации Проекта и за проведение оценки результатов Проекта.

Министерство рассчитывает на дальнейшее длительное и плодотворное сотрудничество со Всемирным Банком, в рамках последующих проектов.

С уважением,  
Ответственный секретарь

**Б. Токежанов**



From: Ministry of Health  
To: Mr. M. Bortman  
Task Team Leader of Kazakhstan Health Sector  
Technology Transfer and Institutional Reform Project

Ref. # 01-3/36  
Date: December 25, 2017

Dear Mr. Bortman,

The Ministry of Health of the Republic of Kazakhstan (MOH) has reviewed the Implementation Completion and Results Report of Kazakhstan Health Sector Technology Transfer and Institutional Reform Project (the Project) provided by the World Bank team.

The Ministry agrees with the assessment of various indicators of the Project provided in the report, such as:

- Overall assessment of the cost-effectiveness is High;
- Efficiency of Project implementation objectives is assessed as Substantial.

The report has also noted that the Project provided growth of efficiency of healthcare resources allocation and promoted increase if equity of this allocation. Technical efficiency was achieved by improved service delivery of cost-effective health care services. Efficiency of resources allocation under the Program led to significant reduction in the targeted Burden of Diseases (BoD) in Kazakhstan, averting more than 2 million of DALYs lost from diabetes and CVDs between 2008 and 2016.

In turn, the Ministry would like to note that the Project provided achievement of two important objectives: institutional reform of the healthcare sector within 6 directions of the Project; transfer of the best international practices, knowledge and standards.

The Ministry thanks you and World Bank team for assistance and support given during Project implementation and for conducting assessment of the Project results.

The Ministry looks to further long-lasting and fruitful collaboration with the World Bank within the framework of follow-up projects.

Sincerely,  
B. Tokezhanov, Executive Secretary



## BORROWER'S CONTRIBUTION TO ICR

### Implementation Completion and Results Report on Kazakhstan Health Sector Technology Transfer and Institutional Reform Project

#### 1. PROJECT OVERVIEW AT ENTRY

##### 1.1. Background

Economic growth of Kazakhstan in early 2000's contributed to substantial increase of healthcare financing and resources. Health sector became one of priorities of social and economic development of the country. With adoption of the State Program of Healthcare Reform and Development in the Republic of Kazakhstan for 2005-2010 on September, 13, 2004, healthcare entered a new phase – phase of institutional changes, capacity building at all levels of the sector and provision of high-tech health services. Kazakhstan Health Sector Technology Transfer and Institutional Reform Project (Project) was focused on development of long-term institutional capacity in the healthcare system based on the transfer of best international experience.

Project executing agency was the Ministry of Health of the Republic of Kazakhstan.

##### 1.2. Project Development Objective

Project objective: to introduce international standards and build long-term institutional capacity in Ministry of Health and related healthcare institutions in support of key health sector reforms pursued by the Government of the Republic of Kazakhstan in the context of the State Program of Healthcare Reform and Development.<sup>7</sup>

##### 1.3. Project Components and Subcomponents

###### Component A “Health Financing and Management”

This component supported improvement of the health financing and management system to encourage providers to deliver effective and quality services to population, strengthen capacity of health managers in health management and health sector investment planning based on equitable, efficient and effective distribution of health funds and development of public-private partnership in the health sector.

###### Structure of Component A:

*A1. Modernization of health financing*

*A2. Modernization of health management*

*A2.1 Health management training*

*A2.2. Restructuring of hospital sector, hospital autonomy and public-private partnership*

**Expected results:** Improved effectiveness and equity of health spending and better financial protection of households in regions implementing the full package of health financing and management reforms.

###### Component B “Healthcare Quality Improvement”

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<sup>7</sup> According to Annex 1 of Loan Agreement signed on February 2, 2008.



This component supported development of the system of accreditation of health facilities, strengthening of capacity in development, dissemination, review and update of evidence-based clinical practice guidelines, creation of the system of health technology assessment based on internationally recognized standards, development of effective model of laboratory service and blood service providing quality and affordable services to population.

**Structure of Component B:**

*B1. Accreditation: modernization of health facility standards*

*B2. Improvement of quality of clinical practice and introduction of health technology assessment*

*B3. Laboratory service reform*

*B4. Blood service reform*

**Expected results:** Improvement of healthcare quality in Kazakhstan through creation of a sustainable system of accreditation, improvement of clinical practice and evidence-based health technology assessment, as well as reform of critical aspects of blood transfusion service and laboratory service in accordance with international standards.

**Component C “Reform of Medical Education and Medical Science”**

This component supported reform of undergraduate and continuous professional medical education and improvement of results-based medical and public healthcare research.

**Structure of Component C:**

*C1. Reform of undergraduate and continuous medical education*

*C2. Modernization of medical research system*

**Expected results:** Improved quality of medical education and better ability to perform medical research through upgrade of medical / pharmaceutical education and management of medical research based on international standards.

**Component D “Health Information System Development”**

This component supported development and operation of Unified Health Information System as part of electronic healthcare development.

**Expected results:** Improved effectiveness and quality of health facility management through access to reliable and timely information in Unified Health Information System.

**Component E “Pharmaceutical Policy Reform”**

This component supported introduction of best international practice into the pharmaceutical benefits system: improvement of evidence-based formulary system; efficient use of drugs; introduction of Master-level pharmacology courses; development of strategy of pharmaceutical policy; development of drug pricing methodology and reference pricing system; improvement of the drug registration system; provision of laboratory equipment, national accreditation IC ISO 17025, and joining the international network EDQM/OMCL, creation of pharmaceutical inspectorate.

**Expected results:** Improved safety, effectiveness, quality and affordability of drugs through reforms in pharmaceutical procurement, pricing, monitoring of medical prescriptions, provision of information, determination of list of drugs for pharmaceutical benefits and pharmaceutical quality control.

**Component F “Food Safety and WTO Accession”**

This component supported improvement of the food safety control system, development of food safety norms and standards in accordance with international standards and WTO accession requirements,



and introduction of HACCP risk management system.

**Expected results:** Improved food safety and faster WTO accession through introduction of international sanitary and phytosanitary norms.

### Component G “Project Management”

This component supported general Project monitoring activities by Project Implementation Unit, which provided technical assistance to MOH RK for Project implementation in accordance with procedures of the World Bank and legislation of the Republic of Kazakhstan. Also, as part of Project extension, this component covered preparation to introduction of Compulsory Social Health Insurance (CSHI), including awareness-raising activities, as well as healthcare quality assurance activities.

#### 1.4. Project Implementation Arrangements

Component / subcomponent	MOH RK	Executing agency	Counterparts
<b>A. Health Financing and Management</b>			
A1. Modernization of health financing	Committee of Payment of Medical Services; Department of Medical Services Standardization <sup>8</sup>	Center for Economic Research of Republican Center for Healthcare Development	Oxford Policy Management (United Kingdom), European Regional Bureau of the World Health Organization (Denmark)
A2-1. Health management training	Department of Science and Human Resources	Center for Management of Republican Center for Healthcare Development	EPOS Health Management GmbH (Germany), Oxford Policy Management (United Kingdom) in partnership with Leeds University (UK)
A2-2. Restructuring of hospital sector, hospital autonomy and public-private partnership	Department of Investment Projects and PPP Development, Department of Organization of Medical Care	Center for Investment Projects of Republican Center for Healthcare Development	Sanigest Internacional (Costa-Rica)
<b>B. Healthcare Quality Improvement</b>			
B1. Accreditation: modernization of health facility standards	Control Committee of Pharmaceutical and Medical Activities <sup>9</sup> , Department of Medical Services Standardization	Center for Accreditation of Republican Center for Healthcare Development	Canadian Society for International Health (Canada) American Gulf International (United States)
B2. Improvement of quality of clinical practice and introduction of health technology assessment	Department of Organization of Medical Care	Center for Healthcare Standardization of Republican Center for Healthcare Development	Canadian Society for International Health (Canada)

<sup>8</sup> Successor – Project Management Department (from March 2017)

<sup>9</sup> Successor – Committee for Public Health Protection (from March 2017)





B3. Laboratory service reform	Department of Organization of Medical Care	Regional consultants (4)	Centers for Diseases Control and Prevention Foundation Inc. (United States)
B4. Blood service reform	Department of Organization of Medical Care	Scientific Production Center for Blood Transfusion	HEAP Research B.V. (Netherlands); American International Health Alliance (United States)
<b>C. Reform of Medical Education and Medical Science</b>			
C1. Reform of undergraduate and continuous medical education	Department of Science and Human Resources	Division of Medical Education Development of Republican Center for Healthcare Development; Human Resources Observatory of Republican Center for Healthcare Development; Center for Assessment of Knowledge and Skills of Republican Center for Healthcare Development	JAMK University of Applied Sciences in Consortium with the Federation of Universities of Applied Sciences (Finland); Canadian Society for International Health (Canada); UCL Medical School Education Consultancy (United Kingdom); European Regional Bureau of the World Health Organization (Denmark); National Board of Medical Examiners (United States); ProFitHR, McMaster Innovation Park, McMaster University (Canada)
C2. Modernization of medical research system	Department of Science and Human Resources	Division of Medical Science Development of Republican Center for Healthcare Development	Centre Hospitalier de l'universite de Montreal (Canada)
<b>D. Health Information System Development</b>	Department of e-Health Development	Division of Electronic Healthcare Standardization of Republican Center for Healthcare Development; Center for Healthcare Informatization of Republican Center for Healthcare Development	Swiss Tropical and Public Health Institute (Switzerland) AAM Management Information Consulting (Hungary), Ion Stanciu (Moldova), Dimitris Kalogeropoulos (Greece)
<b>E. Pharmaceutical Policy Reform</b>	Committee of Pharmacology	Pharmaceutical Information and Analytical Center of Republican Center for Healthcare Development Editorial Group of Kazakhstan National Drug Formulary	Euro Health Group (Denmark); Evidence Based Networks (United Kingdom)
<b>F. Food Safety and WTO Accession</b>	Committee of Public Health Protection	Codex Alimentarius Group	AECOM International Development Europe S.L. (Spain); Società Italiana di Monitoraggio S.p.A. (Italy); T&M Associates (United States)
<b>G. Project Management</b>	Department of Investment Projects and PPP Development	Project Implementation Unit, Prevention Medicine Academy, Legal Firm "GRATA", Black & White GROUP,	Sanigest Internacional (Costa-Rica), Società Italiana di Monitoraggio S.p.A. (Italy), Oxford Policy Management





		Arkhetip, CINEMA PROPERTY MANAGEMENT, etc.	(United Kingdom), Gintaras Kachyavichus (Lithuania), Assaf Al Assaf (United States), Cony Davis (Canada)
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## 2. PROJECT DESIGN, IMPLEMENTATION AND IMPACT

### 2.1. Project Design Assessment

Since the Project focuses on transfer of international technologies, it supported the use of state-of-art methodologies and approaches that proved to be successful in countries with developed healthcare, such as use of National Health Accounts, approaches to hospital sector restructuring, accreditation of health facilities, health technology assessment, problem-oriented medical education, prioritization of medical research, approaches to registration of drugs and their provision to population, introduction of food safety standards in accordance with WTO requirements, and a number of other internationally recognized technologies.

The Project became the first health project and the largest institutional project in Kazakhstan.

### 2.2. Key Project Results

#### *Component A: Health Financing and Management*

- new institutional structures were created: Center for Economic Research, Bureau of Diagnosis Related Groups, Center for Management, Center for Investment Planning;
- over 16,000 individuals were covered with various forms of training, both domestically and abroad;
- methodology of National Health Account compilation was developed; starting from 2010-2011, reports on health expenditures in the Republic of Kazakhstan have been produced annually;
- based on best international experience, diagnosis related groups, complex per capita outpatient-level norm, and global budget of cancer service were developed and introduced into practice, other methods of payments for health services were improved;
- innovational methods of basic benefits package were developed with consideration of health services specification;
- approaches and criteria to determining the primary care services were developed based on “golden standard” of primary care of developed Western European countries; these approaches were included in the updated list of basic benefits package;
- approaches to per capita budget allocation, which were introduced into practice with development of complex per capita outpatient-level norm, were developed;
- conditions were created for autonomy of basic benefits package providers and development of the health services market;
- proposals were prepared for development of voluntary health insurance market through lowering of tax burden for insured citizens. These proposals were incorporated into the Tax Code of the Republic of Kazakhstan;
- proposals were prepared for implementation of compulsory social health insurance. These recommendations were incorporated into laws “On Compulsory Social Health Insurance” and “On Amendments to Some Legal Acts of the Republic of Kazakhstan Related to Compulsory Social Health Insurance”;
- specialization “Health manager” was included in classification of Master-level specializations



(6M110600 in NC RK 08-2009);

- occupational standard for health managers, Master program, and model curricula for short-term training in health management were developed;
- starting from 2012, quarterly magazine “Health Manager of the Republic of Kazakhstan”, which publishes materials reflecting the development of health management in Kazakhstan, has been issued;
- investment planning recommendations were developed, new state standard for health facility network based on internationally accepted approaches to network standards was introduced;
- master plans of hospital sector, primary care sector and laboratory service development for each region of the country were designed, recommendations from master plans were included in regional development plans of health facilities network till 2025;
- in order to promote public-private partnership, List of Facilities not Allowed for Concession approved by Order of the President of the Republic of Kazakhstan dated March 5, 2007, # 294, was shortened. As a result, prohibition to grant concession was kept only for blood service facilities, HIV/AIDS prevention facilities, as well disaster medicine facilities;
- proposals for draft law “On Public-Private Partnership” were developed.

#### ***Component B: Healthcare Quality Improvement***

- national system of health facility accreditation was created, hospital and primary care standards were recognized by International Society for Quality in Healthcare (ISQua);
- accreditation curriculum was also internationally recognized by ISQua;
- accreditation standards for facilities providing blood transfusion services, emergency care, rehabilitation care and nursing assistance were developed and approved;
- pool of accreditation experts, particularly for laboratories, was developed; annually they carry out external comprehensive assessment of about 200 health facilities;
- foundation for the national system of health technology assessment was built – 17 full HTAs and over 1,500 reviews of new health technologies, drugs and medical equipment (mini HTA) were performed;
- system of clinical protocols design and revision was created based on clinical guidelines’ recommendations;
- disease management program was piloted in 7 outpatient facilities in Pavlodar and North-Kazakhstan Oblasts for three nosologies: arterial hypertension, diabetes, and chronic cardiac failure;
- regulatory basis for standardization of healthcare was created based on medical care organization standards for 26 profiles;
- 5 pilot clinical diagnostic laboratories in 4 regions (Semey, Uralsk, Almaty, Astana) were prepared for international standard ISO 15189-2012;
- system of external quality assessment of blood service was created (ISO 17043);
- new institutional structures were created: Center for Accreditation, Center for Healthcare Standardization, which became incumbent members of international quality agencies ISQua, GIN, HTAi, INAHTA, and ISPOR;
- training of around 10,000 individuals in healthcare quality assurance was held, both inside country and at international health centers.

#### ***Component C: Reform of Medical Education and Medical Science***

- Concept of Development of Medical and Pharmaceutical Education of the Republic of Kazakhstan for 2011-2015, Comprehensive Plan of Healthcare Human Resources Development for 2013-2016, Comprehensive Plan of Nursing Care Development of the Republic of Kazakhstan till 2020, and Concept of Development of Medical Science till 2020 were adopted;
- conceptual foundation of medical education management and financing was developed,



including professional development of faculty and introduction of innovational technology in medical education;

- two methodological approaches to enrollment and selection of citizens to medical educational institutions were piloted: computer-based psychometric testing, and multiple mini-interview;
- six medical universities of the Republic of Kazakhstan passed institutional accreditation and were included in the global database “Avicenna Directories” of WHO / WFME and five universities of the Republic of Kazakhstan passed specialized accreditation for a number of Bachelor, residency, Master and PhD specializations;
- competency-based educational programs “General Medicine” and “General Medical Practice” (residency) were developed;
- State Standard of Extended Education of the Republic of Kazakhstan and Model Curriculum “Teacher of Medical Education and Science Organizations” was developed;
- applied Bachelor educational program for specialization “Nursing care” was developed and implemented in six pilot medical colleges of the Republic of Kazakhstan;
- Observatory of Healthcare Human Resources was created;
- assessment of financing, education, management and political context was carried out for strategic planning of healthcare human resources using WHO tool;
- Republican Center for Knowledge and Skills Assessment was created; it was accredited by the authorized body to carry out assessment of professional level and proficiency testing of specialists;
- qualification examination of healthcare specialists based on assessment of practical skills was carried out;
- 16 regional simulation centers were opened;
- annual complex testing of internship and residency graduates was introduced;
- medical science portal was created - [www.medscience.kz](http://www.medscience.kz) ;
- methodology of ranking of research organizations and medical universities based on research and innovational performance was introduced;
- independent system of medical science review was created in order to assess scientific validity, implementability, expected efficiency and effectiveness of programs, as well as to evaluate significance of results (at implementation, completion and introduction stages);
- operational procedures standards were introduced for ethics commissions of medical education and science organizations of the Republic of Kazakhstan;
- dual Master-level educational program for specializations “biomedical research methodology” and “biostatistics” was developed.

#### ***Component D: Health Information System Development***

- Concept of Electronic Healthcare Development in the Republic of Kazakhstan for 2013-2020 was developed and approved; it defines strategic approaches to informatization of health sector, which support development of patient-oriented healthcare. In this concept, MOH RK abandoned the earlier established monopoly for sector informatization and moved to development of the open market of electronic healthcare solutions;

- 18 standards of electronic healthcare were developed and approved, record registration of two international standards on the territory of the Republic of Kazakhstan was carried out, three tentative national standards were approved. These documents helped ensure unified requirements to organizational and structural interoperability in healthcare at national level;

- new institutional structures were created: Center (Department) for Informatization of Healthcare within the Republican Center of Electronic Healthcare, which manages and implements projects at national level, supports information systems of MOH RK, facilitates local-level projects; Division of Standardization of Electronic Healthcare within the Republican Center of Healthcare Development, which



coordinates and develops standards and regulations;

- the Project supported creation of Department of Development of Electronic Healthcare of Ministry of Health of the Republic of Kazakhstan, and Technical Committee for Standardization #83 “Electronic Healthcare”;

- assessment of design and effectiveness of information systems of MOH RK was carried out;
- independent audit of information security for compliance with ISO standards was carried out;
- design of current and targeted architecture of electronic healthcare was supported;
- IT infrastructure was established in health facilities of Astana City, Akmola and Karaganda

Oblasts;

- 20 modern web-applications supporting the Unified Health Information System, health facility financing, monitoring and promoting of healthcare quality, free choice of health facility by patient, recording and analysis of all forms of healthcare within basic benefits package were introduced throughout the territory of the Republic of Kazakhstan;

- activities for creation of Electronic Health Passport, which will be used to store key data about health of each citizen of the Republic of Kazakhstan, and patient’s Personal Account, which will be used to inform and engage citizens in protection of own health, have started;

- national-level healthcare hardware IT infrastructure was established through creation of two national-level health data processing centers;

- pilot project for introduction of third-party health information systems in four health facilities of the Republic of Kazakhstan is being implemented;

- about 20,000 individuals were trained in informatization.

#### ***Component E. Pharmaceutical Policy Reform***

- draft National Pharmaceutical Policy and associated implementation plan till 2020 were developed;

- Strategy of Development of Outpatient Pharmaceutical Benefits till 2020 and indicators of evaluation of the outpatient pharmaceutical benefits system were developed;

- Republican Drug Formulary was updated, with removal of outdated drugs and drugs with missing information about effectiveness from internationally recognized sources;

- Kazakhstan National Drug Formulary was developed based on model and experience of the British National Formulary;

- editorial group of Kazakhstan National Drug Formulary was established;

- List of Drugs for Free Pharmaceutical Benefits was optimized, with consideration of continuity of therapy at inpatient and outpatient levels;

- Drug Information and Analytical Center with branches in 14 oblast centers and Almaty City, as well as Call-service, were created;

- training center for best practices was created;

- pharmaceutical inspectorate service was created, the process of Kazakhstan’s accession to the international Pharmaceutical Inspection Co-operation Scheme (PIC/S), Geneva, was initiated;

- Testing Center of RSE “National Center of Review of Drugs, Medical Products, and Medical Equipment” was equipped with modern laboratory equipment, and laboratory staff underwent training. The Testing Center passed full accreditation under standard ISO 17025;

- following international audit by auditors of European Directorate for the Quality of Medicines and Healthcare (EDQM), physical and chemical laboratory of the Testing Center passed full accreditation and became an associated member of OMCL/EDQM network;

- over 40,000 individuals were covered with various forms of training.

#### ***Component F: Food Safety and WTO Accession***



- food safety technical regulations of the Customs Union, which meet international requirements, including Codex Alimentarius, were developed;
- proposals for harmonization of 26 national technical regulations and 25 sanitary rules and regulations with WTO, FAO, and Codex Alimentarius requirements were developed;
- harmonization of standards was carried out in terms of food safety indicators, including maximum permissible levels of nitrates, radionuclides, antibiotics and veterinary preparations in foodstuffs stipulated by technical regulations of the Customs Union, in accordance with international requirements;
- foodstuffs GMO testing was introduced;
- preparatory activities for introduction of HACCP principles – a systemic approach to food safety at all stages of the production cycle – were carried out;
- 11 centers of sanitary and epidemiological expertise were equipped with modern laboratory and special equipment and diagnostic tests;
- participation of Kazakhstan in Codex Alimentarius and other international organizations was achieved;
- assistance was provided for creation and operation of information center for TBT/SPS measures at RSE “KazInSt” of Committee for Technical Regulation and Metrology of MID RK;
- about 2,400 specialists of consumer rights protection departments and centers of expertise, as well entrepreneurs, were trained in food safety topics, including HACCP;
- Central Asian Training Center for Food Safety, including HACCP, was established;
- Interdepartmental Coordination Council of Codex Alimentarius was established ([www.codexalimentarius.kz](http://www.codexalimentarius.kz));
- large-scale food safety communication campaign was carried about among various groups of population using information and training materials on food safety.

### **Component G: Project Management**

- daily project management was provided in accordance with procedures with the World Bank and legislation of the Republic of Kazakhstan;
  - mid-term project evaluation was carried out;
  - comprehensive survey of health facilities, suppliers and recipients of services and household health survey were carried out;
  - training activities in fiduciary procedures, investment project management and awareness raising about project progress were implemented;
- During 2016-2017, as part of project extension:
- organizational activities for creation of the Fund of Social Health Insurance, including awareness raising activities, were carried out;
  - healthcare quality management work continued – Center for Accreditation of the Republican Center of Healthcare Development was recognized by International Society for Quality in Healthcare ISQua as an independent body for accreditation of health facilities;
  - Disease Management Program was extended to 7 pilot regions, covering 30 polyclinics and over 3 000 patients.

### **2.3. Project Coordination and Management**

Project was supervised by the coordinating Vice Minister of Health, or Executive Secretary of MOH RK, who managed the Coordination Group for Project Implementation. A division responsible for Project implementation was Department of Strategic Development, its successor, Department of Medical Services Standardization, and from 2015 – Department of Investment Policy, which coordinated the



Project Implementation Support Team and all Project activities. The Project Implementation Support Team ensured compliance with fiduciary procedures and implementation of project activities jointly with line divisions of MOH RK.

This interaction was quite effective, but due to frequent staff changes, it required efforts to engage the new staff.

#### **2.4. Project Impact on Implementation of Health Sector Reforms and Programs**

Over the years of implementation, the Project covered three state programs of healthcare development and was fully aligned to them. Besides, current projects of MOH RK benefited from the Project's support due to flexibility of project activities planning. All staff of MOH RK and most subordinate organizations were engaged in the Project's capacity building activities and applied the acquired knowledge in new areas of activities.

## **2. CRITICAL ANALYSIS OF ACTIONS TAKEN BY THE WORLD BANK, GOVERNMENT AND PERSONS / ORGANIZATIONS PROVIDING TECHNICAL ASSISTANCE**

### **3.1. Assessment of Bank's Performance during Project Implementation**

Development and approval of the Concept of Development of Electronic Healthcare and related changes, which were actively supported by the World Bank, contributed to changes in approaches to project implementation and key project parameters, including extension of its implementation period.

### **3.2. Assessment of Government's Performance during Project Implementation**

The existing legislation does not provide an arrangement for amicable settlement of disputes with suppliers (HEAP Research B.V.), which would be acceptable to the authorities. Therefore, the out-of-court settlement arrangement, which is stipulated by contracts, is not implemented, and all disputes go to arbitration.

### **3.3. Assessment of Effectiveness and Quality of Relations between the World Bank and Government during Project Implementation**

All matters, which required attention of the World Bank and the Government, were jointly discussed during supervision missions. Decisions were made in timely and effective manner.

### **3.4. Assessment of Performance of Various Organizations Providing Goods and Services and Persons / Organizations Providing Technical Assistance during Project Implementation (Cost-Benefit Analysis)**

In accordance with the project implementation arrangements, cost effectiveness was pursued through alignment of areas and tasks both within the Project and within individual contracts with key strategic documents of MOH RK and Government of the Republic of Kazakhstan. Consulting contracts that were implemented in form of twinning arrangements proved to be highly effective. Long-term partnership with consultants, which was developed through such contracts, enabled implementation of key strategic reforms under conditions of close interaction and synthesis of international and local experience and expertise.





### 3. ECONOMIC AND FINANCIAL EVALUATION OF THE PROJECT

#### 4.1. Total Cost of the Project

Project cost at the negotiation stage was: loan USD 117.7 million (40%), cofinancing of the Republic of Kazakhstan USD 178.3 million (60%). During the project implementation, total cost was: loan USD 117.7 million (50%), cofinancing of the Republic of Kazakhstan USD 114.2 million (50%). When converted to the national currency, following two devaluations project cost escalated by 60%. During project implementation, the Project's feasibility study was revised three times due to extension of the closing date, with subsequent adjustment of key activities, which led to deviations in costs of project components and cost categories.

#### Project Cost by Component (thousand USD)

Component	Plan	Actual as of 31.10.2017	Deviation
Component A	26 645	26 645	0
Component B	26 489	26 489	0
Component C	13 030,6	13 030,7	0
Component D	125 976,9	114 186,7	11 790,2
Component E	24 478,2	23 978,4	499,8
Component F	7 139,3	7 139,3	0
Component G	8 171,1	7 839,05	332,05
<b>Total</b>	<b>231 930,3</b>	<b>219 308,2</b>	<b>12 659,45</b>

#### Breakdown by Cost Categories (thousand USD)

Categories	Plan	Actual as of 31.08.2017	Deviation
Goods and services	68 200	75 559,25	-7 359,25
Training and consulting services	49 300	36 902,35	12 397,65
Operational costs	173,02	92,5	80,52
<b>Total</b>	<b>117 673,02</b>	<b>112 554,1</b>	<b>5 118,92</b>

#### Breakdown by Components and Sources of Financing according to Feasibility Study 2015

	Plan			Actual as of 31.10.2017		
	WB	Republican budget	Total	WB	Republican budget	Total
Component A	15 764,3	10 880,7	26 645	15 764,3	10 880,7	26 645
Component B	8 676,9	17 812,1	26 489	8 676,9	17 812,1	26 489
Component C	4 583,5	8 447,1	13 030,6	4 583,6	8 447,1	13 030,7
Component D	74 407,2	51 569,7	125 976,9	71 781,7	42 404,95	114 186,7
Component E	9 361,4	15 116,8	24 478,2	7 212,6	16 765,81	23 978,41
Component F	0	7 139,3	7 139,3	0,0	7 139,3	7 139,3



Component G	4 879,6	3 291,5	8 171,1	4 535,0	3 304,05	7 839,05
<b>Total</b>	<b>117 673,02</b>	<b>114 257,2</b>	<b>231 930,3</b>	<b>112 554,1</b>	<b>106 754,1</b>	<b>219 308,2</b>

**4.2 Estimated Annual Current Costs Associated with the Project and Affecting the Budget**

As of October 31, 2017, USD 219.3 million were disbursed (94.57%), out of which USD 112.6 million came from loan (95.7%) and USD 106.8 million – from cofinancing (93.43%).

Disbursement by years	Total, thousand USD	World Bank, thousand USD	Government of the Republic of Kazakhstan, thousand USD
Project cost	<b>231 930,2</b>	<b>117 673,0</b>	<b>114 257,2</b>
Disbursed in 2009	8 958,4	2 683,9	6 274,5
Disbursed in 2010	23 667,1	16 684,6	6 982,5
Disbursed in 2011	14 949,7	7 705,9	7 243,8
Disbursed in 2012	35 937,9	17 155,5	18 782,4
Disbursed in 2013	25 116,8	8 133,8	16 983,0
Disbursed in 2014	19 187,0	5 475,9	13 711,1
Disbursed in 2015	19 937,3	7 849,0	12 088,3
Disbursed in 2016	39 907,5	30 451,7	9 455,8
Disbursed in 2017 (31.10)	31 646,5	16 413,8	15 232,7
Disbursed, total	<b>219 308,2</b>	<b>112 554,1</b>	<b>106 754,1</b>

**4.3 Project Impact on Institutional Structures Created and / or Financed by the Project**

All technical centers created within the Project continue operating at the post-project stage and implement public assignment of MOH RK in support of state program implementation. Some technical centers that have developed sustainable business processes and have integrated into the international community (Center for Accreditation, Center for Assessment of Knowledge and Skills, Center for Healthcare Standardization of the Republican Center for Healthcare Development, etc.) took over some public functions, including transformation of the Joint Commission for Healthcare Quality into a self-regulating organization.

**4.4 Key Lessons Learnt**

Large scope of work of consulting firms was related to sharing of international experience in various areas of healthcare and subsequent development of recommendations on improvement of legislation. Provision of regulations, rather than only approaches and recommendations from leading countries, might have significantly increased effectiveness of some Project activities.

As a result of uneven implementation of Project subcomponents caused by delays in bidding procedures for selection of partner organizations, some activities passed ahead of standards implementation. In particular, national accreditation that successfully started in 2009 did not include importance elements of quality, such clinical protocols and standards laboratory tests, incompliance with which is the most frequent reason of poor quality health services. Duration of bidding procedures for





supply of goods led to a series of successive delays in implementation of Project activities (Component D).

Planning of activities under Component C “Reform of Medical Education and Science” provided for a large number of contracts, which were small in value and scope of services. This led to longer period of selection of consultants, need to integrate consultants’ proposals into a single model of medical education, and complexity in synchronization of timeframes for implementation of recommendations.

Lack of experience with consulting firms, which provided services strictly according to contracts and, in some cases, were reluctant to settle for changes in activities’ focus, led to delays in implementation. This was also attributed to the fact that companies hired subcontractors with pre-agreed scope of work, which was not subject to negotiation. In one case, lack of understating and cooperation led to arbitration (HEAP Research B.V.).

Lack of understanding and ownership of reforms among territorial health authorities hampered the implementation of project activities in regions (master plans of network restructuring, introduction of disease management programs). Only financial incentives and regular training activities, including training abroad, motivated experts for external assessment of health care quality, developers of clinical protocols and standards of specialized services, HTA experts, regional coordinators of disease management programs, laboratory service specialists, etc, to participate in project activities.

Limited financial capacity of health facilities did not let them implement best practices, which required additional investment of resources (international accreditation of Scientific Production Center for Blood Transfusion and pilot clinical and diagnostic laboratories, etc.).

Frequent turnover of key specialists of MOH RK and Republican Center for Healthcare Development, who took an active part in implementation of specific project activities, undermined overall implementation effectiveness. Capacity that was built in the beginning of project implementation moved to other parts of the healthcare system. This affected success of project implementation, although in general, as far as technology transfer is concerned, supported the healthcare system development, since this capacity strengthened activities, which were initiated by the Project, in other organization. This is demonstrated by higher activity of non-government and civil society organizations.

#### **4. SUSTAINABILITY OF PROJECT INVESTMENTS**

The Project laid foundation for further development of the healthcare system in Kazakhstan. Project sustainability suggests incremental implementation of structural reforms in the health sector after the Project, based on application and improvement of resources and tools provided by the Project.

*Capacity building* of staff of MOH RK, other government bodies, as well as medical professional of the healthcare system. Throughout the project implementation period, various forms of training (Master-level programs, internships, participation in international conferences, study tours, cascade training, seminars, roundtables, etc.) covered over 90,000 individuals. This critical mass laid foundation for further demand for new knowledge and support to the reforms.

*Creation of technical centers* (Center for Economic Research, Center for Management, Center for Investment Projects, Bureau for Diagnosis-Related Groups, Center for Accreditation, Center for



Healthcare Standardization, Human Resources Observatory, Center for Assessment of Knowledge and Skills, Center (Department) for Healthcare Informatization, Pharmaceutical Information and Analytical Center, Editorial Group of Kazakhstan National Drug Formulary, Codex Alimentarius, etc.) laid institutional foundation for formalization and further development of Project results through job creation, relevant research and training of healthcare professionals.

***Incorporation of Project results into regulations.*** Majority of Project achievements were incorporated into the existing legislation, which made healthcare regulation practices in Kazakhstan more aligned with best international experience. Creation of such regulatory framework laid foundation for further breakthrough in the sector development.

***Introduction of academic autonomy of universities, independent certification of professionals and monitoring of the labor market*** will support the establishment of a flexible system of healthcare workforce training, which would respond to changing needs of the labor market, and will create conditions for training of qualified and competitive workforce.

***Focus on primary care.*** Implementation of such activities as implementation of disease management programs, development and introduction of clinical protocols, improvement of pharmaceutical benefits, introduction of new methods of payment for health services, implementation of master plans for network restructuring, etc., will enable creating an effective and sustainable primary care service.

***Mechanisms of health services quality.*** Accreditation, evidence-based medicine, health technology assessment, and quality management system constitute a continuous and cyclical process covering all levels of care. Project results can be maintained and improved only with continuous improvement of these mechanisms.

***Pharmaceutical quality assurance.*** EDQM/OMCL accreditation of National Center of Assessment of Pharmaceuticals, Kazakhstan's accession to PIC(S), good practices inspection, and combating counterfeit drugs will allow strengthening the system of pharmaceutical quality control and, in general, managing the quality and safety of drugs.

***Focus on structural reforms.*** A number of activities started as pilots (diagnosis related groups, quality management system, accreditation standards, disease management program, medical education, etc.) and afterwards, after review of lessons learnt and changes in practices and mindset of medical professionals, were implemented throughout the country. Experience of staff of MOH RK and medical professionals in implementation of and participation in pilots will enable them develop deliberate approaches to policy making and implement changes on a phased basis.

***Modernization of infrastructure.*** Development of a new state standard of health facility network and development of regional master plans of restructuring of hospital sector, primary care and laboratory services enabled developing an investment policy in the health sector for the coming years. Incorporation of master plans into the regional plans of health facility network development will allow creating the “demand infrastructure” for best practices.

***Further development of information technology*** in healthcare is one of prerequisites not only for sustainability of the healthcare system as a whole, but also for its transformation for achievement of goals, as well improvement of public health. Electronic health tools can influence the effectiveness,



affordability, safety, quality and equity of healthcare. Penetration of information and communication technology into routine processes enables making qualitative changes in the interaction between patients and the health services system and facilitating both clinical and political evidence-based decision making.

***Inter-sector cooperation in the field of food safety.*** Joint efforts of government bodies of the Republic of Kazakhstan and food industry for implementation of HACCP principles are essential for food safety, as well as for higher competitiveness of Kazakhstan's foodstuffs at the global market.

***Commitment to reforms.*** Further progress and implementation of measures developed by the Project – national pharmaceutical policy, strategy of outpatient pharmaceutical benefits, disease management programs, introduction of quality management system in laboratories, mission-based budgeting in universities, etc. – will contribute to achievement of long-term goals of healthcare development.

***Cooperation with international organizations.*** Membership of MOH RK and technical centers in specialized international associations is one of critical sources of new knowledge, way of aligning the national policy with best international practices, and a tool for enhancing the image of the Republic of Kazakhstan on the global stage.

## 5. CONCLUSIONS

Healthcare system of Kazakhstan became one of priorities of social and economic development of the country. In particular, on September 13, 2004, State Program of Healthcare Development and Reform in the Republic of Kazakhstan for 2005-2010 (State Program) was adopted. It was developed in pursuance of address of the Head of the State to People of Kazakhstan dated March 19 "To Competitive Kazakhstan, Competitive Economy, and Competitive Nation".

The State Program defines a whole of required economic, social, organizational and other measures aimed at development of affordable, quality and cost-effective system of healthcare in the Republic of Kazakhstan.

In this context, the Government of the Republic of Kazakhstan decided to implement international standards in the health sector. For this purpose, investment Project "Health Sector Technology Transfer and Institutional Reform in the Republic of Kazakhstan for 2008-2013" was developed.

On February 2, 2008, the Government of the Republic of Kazakhstan and International Bank for Reconstruction and Development signed Loan Agreement.

The goal of the Project is to implement international standards and develop long-term institutional capacity to support the State Program of Healthcare Development.

Implementation of the Project started in 2009, with activities supported within the United National Healthcare System. The Project was extended twice, till December 31, 2015, and June 30, 2017, respectively.

Content of Project activities was fully aligned to the State Program of Healthcare Development "Salamatty Kazakhstan" for 2011-2015 and "Densaulyk" for 2016-2019. Project implementation was based on transfer of best international technology to MOH RK, other government bodies, health facilities and new institutional entities, which were created within the Project.



Based on the Project results, it may be said that an effective institutional system of governance and highly professional capacity have been developed in the healthcare system of Kazakhstan.



## **ANNEX 6. SUPPORTING DOCUMENTS**

1. Project Appraisal Document
2. Financing Agreement
3. Country Partnership Strategy
4. Restructuring Papers
5. Health Project Implementation Unit, Progress Management Reports
6. Aide Memoires and Back-to-Office Reports
7. Management and other important letters and memoranda
8. Implementation Status and Results Reports (ISRs)
9. Borrower's Contribution to ICR