



# HEALTHCARE IN KAZAKHSTAN

A Brief Overview

## **TABLE OF CONTENTS**

- 1 SOCIOECONOMIC PROFILE**
- 2 HEALTHCARE REFORMS**
- 3 HEALTH STATUS**
- 4 MORTALITY BY CAUSES**
- 5 HEALTHCARE EXPENDITURE**
- 6 HEALTHCARE WORKFORCE**
- 7 MEDICAL EDUCATION**
- 8 MEDICAL SCIENCE**
- 9 MEDICAL CARE QUALITY CONTROL**
- 10 DRUG PROVISION**
- 11 HEALTH INFORMATION SYSTEMS**
- 12 HEALTHCARE INFRASTRUCTURE**
- 13 PUBLIC-PRIVATE PARTNERSHIPS**



## SOCIOECONOMIC PROFILE

### Total area

**2 724 900**

km<sup>2</sup>

**9th**

largest country in the world

### Border length

**13394**

km

### Administrative division

**14**

provinces

**2**

cities of republican status

**177**

districts

**87**

cities

**30**

rural towns

**6693**

villages

### Capital

**Astana**

Population of **over 1 million**

### Largest city

**Almaty**

Population of **over 1.7 million**

### Largest province

**Karagandy**

Total area of **428** thousands km<sup>2</sup>

### Most densely populated province

**South Kazakhstan**

Density of **24.2** people per 1 km<sup>2</sup>

### Demographics

**18.0** million

**6.5** people per 1 km<sup>2</sup>

**57.5%** urban

**42.5%** rural

**51.6%** female

**48.4%** male

### GDP

**\$ 460** billion (PPP)  
(2016)

**\$ 25 669** per capita (PPP)  
(2016)



## HEALTHCARE REFORMS

2004	State program of reform and development of healthcare for 2005-2010
2009	Code of the Republic of Kazakhstan "On health of the population and the healthcare system"
2009	Concept of the Unified national healthcare system
2010	"Salamatty Kazakhstan" state healthcare development program for 2011-2015
2016	"Densaulyk" state healthcare development program for 2016-2019

### "Densaulyk" State healthcare development program for 2016-2019

**Key goal:** strengthening the health of the population to ensure sustainable socioeconomic development

#### Objectives:

- Implementation of a new policy of protecting the health of the population based on an integrated approach to disease prevention and management
- Modernization of the national healthcare system oriented towards efficiency, financial stability and support for socioeconomic growth



## HEALTH STATUS

### Life expectancy

**72.3**

years (2016)

**6.4 years**

increase since 2005

### Total mortality rate

**7.44**

per 1000 (2016)

**28%**

decrease since 2005

### Infant mortality rate

**8.6**

per 1000 live births (2016)

**43.4%**

decrease since 2005

### Maternal mortality rate

**12.7**

per 100 000 live births (2016)

**68.6%**

decrease since 2005

## MORTALITY BY CAUSES (per 100 000)



### Diseases of the circulatory system

**178.9**

(2016)

**66.6%**

decrease since 2005



### Diseases of the respiratory system

**102.1**

(2016)

**73.9%**

increase since 2005



### Malignant neoplasms

**90.2**

(2016)

**26.4%**

decrease since 2005



### Accidents, poisoning and trauma

**75.1**

(2016)

**49.2%**

decrease since 2005



### Diseases of the digestive system

**71.0**

(2016)

**43.7%**

increase since 2005



### Infectious and parasitic diseases

**7.8**

(2016)

**72.4%**

decrease since 2005



## HEALTHCARE EXPENDITURE

**61% public** (2015)



**39% private** (2015)

### Public healthcare expenditure (2016)

**₹ 1048.3 bln**

(2016 average exchange rate: US \$1 = ₹ 342.16)

**2.3%**

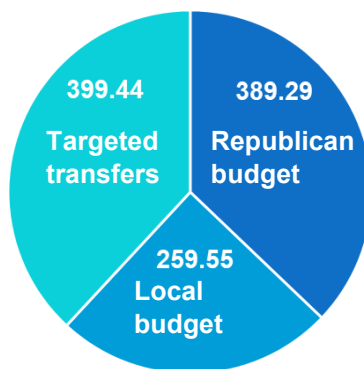
of GDP

**10%**

of state budget  
compared to the OECD  
average of **15%** (2015)

### Financing sources

(billions of ₹, 2016)



### Total healthcare expenditure (2015)

**\$ 6.69 bln**

(2015 average exchange rate: US \$1 = ₹ 221.73)

**₹ 378.66**

per capita (2015)

**3.6%**

of GDP (2015)  
compared to the OECD  
average of **8.9%** (2015)



## HEALTHCARE WORKFORCE

# 245.4 thousands

of medical workers (2016)



## 74.6

thousands of doctors (2016)

## 41.9

doctors per 10 000 (2016)  
compared to the OECD  
average of **33** (2016)



## 170.8

thousands of middle-level  
medical personnel (includes  
nurses, midwives, lab techs etc)  
(2016)

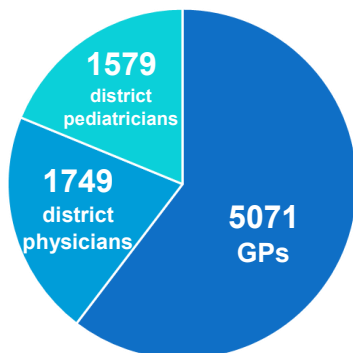
### Primary care

## 8.4

thousands of doctors (2016)

## 4.7

doctors per 10 000 (2016)







## MEDICAL EDUCATION

### Key legislation

2006

The Framework of Medical and Pharmaceutical Education Reform for 2006-2010

2011

The Framework of Medical and Pharmaceutical Education Development for 2011-2015

2017

The "Modernization of Medical Education and Science" Project  
(as part of the "Densaulyk" State Healthcare Development Program for 2016-2019")



### Medical education providers



**12** higher education institutions, including

**+4**

increase since 2005



**6** public medical universities

**1** private medical university

**2** private postgraduate schools

**3** medical faculties at universities  
(Kazakh National University, Nazarbayev University & Ahmet Yesevi University)

**80** medical colleges (equiv. to vocational school)

**+49**

increase since 2005



## MEDICAL SCIENCE

### Medical research organizations

**24**

research institutes

+

**Center for Life  
Sciences** at  
Nazarbayev  
University

**2 shared  
laboratories** at  
medical  
universities

**+5**

increase since 2005

### Medical research

**₸ 1414 mln**

allocated funds for applied re-  
search studies (2017)

(2017 average exchange rate: US \$1 = ₸ 333.68)

### Key initiatives in 2017

- Best practices (GCP & GLP)
- Ethics committees (central and local)
- Health technology assessment (>200 technologies approved)

**207**

articles published in peer-  
reviewed journals (2016)

**326**

titles of protection obtained  
(2016)

**28**

research programs in  
collaboration with foreign  
organizations (2016)



## MEDICAL CARE QUALITY CONTROL

### Accreditation of medical organizations

<p style="text-align: center;"><b>169</b></p> <p>organizations accredited in 2016, including</p> <p style="display: flex; justify-content: space-around;"><b>94</b> public organizations      <b>75</b> private organizations</p>	<p>National accreditation standards of <b>outpatient care, accredited by ISQuA</b> in May 2017, include</p> <p style="display: flex; justify-content: space-around;"><b>99</b> standards      <b>495</b> criteria</p>	
	<p>National accreditation standards of <b>inpatient care, accredited by ISQuA</b> in August 2017, include</p> <p style="display: flex; justify-content: space-around;"><b>100</b> standards      <b>500</b> criteria</p>	

### Introduction of Disease Management Programs

<b>2013</b>	<p>1<sup>st</sup> stage of implementation</p> <ul style="list-style-type: none"> <li>• <b>3</b> conditions selected (arterial hypertension, diabetes, chronic heart failure)</li> <li>• <b>2</b> pilot regions</li> </ul>
<b>2016</b>	2 <sup>nd</sup> stage of implementation: <b>5</b> pilot regions added
<b>2017</b>	3 <sup>rd</sup> stage of implementation: include all regions

### DMP outcomes in 2 pilot regions (2016)

Pavlodar	North Kazakhstan
<b>51%</b> of patients reaching the target level of ABP	<b>53%</b> of patients reaching the target level of ABP
<b>11%</b> of patients with CHF hospitalized	<b>13%</b> of patients with CHF hospitalized
<b>96%</b> of patients with diabetes reaching the target level of glycated haemoglobin	<b>60%</b> of patients with diabetes reaching the target level of glycated haemoglobin



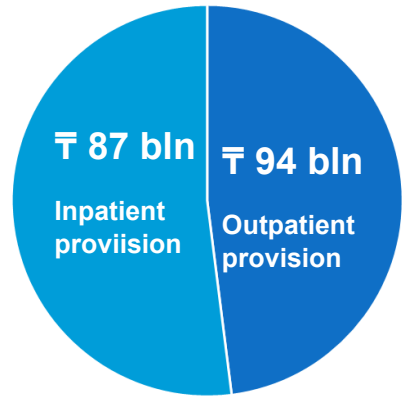
## DRUG PROVISION

₹ 181.2 bln

pharmaceutical expenditure  
(2016)

0.7%

of GDP



### National Drug Policy: key areas



#### Availability & affordability

Price regulation

Harmonization of  
assessment  
procedures with  
those of OECD

Expanding  
outpatient provision



#### Quality & safety

Increasing the proportion of  
products, the safety and  
quality assessment of which is  
performed through certification

Increasing the number of  
report forms on side effects or  
lack of effect



#### Rational drug use

Increasing the proportion of  
prescribed drugs with proven  
effectiveness

Introducing a system for  
monitoring the validity of  
prescriptions



## HEALTH INFORMATION SYSTEMS

### The target model of digital healthcare

#### Creating a platform of interoperability



22 information systems of the Ministry of Health



The information system of the Social Health Insurance Fund



Medical information systems



Electronic health records



Personal dashboards for patients



Personal dashboards for doctors

#### Introducing local medical information systems

**45%**

current coverage (2017)



**100%** coverage  
targeted by 2019

**74.4%**

of medical organizations  
equipped with modern  
computer equipment (2017)



**100%** coverage  
targeted by 2019



## HEALTHCARE INFRASTRUCTURE

### Medical organizations

**840**

inpatient hospitals (2017)

**80%** public

**20%** private

**2718**

outpatient hospitals (2017)

**68%** public

**32%** private

**87 287**

hospital beds (2016)

**48.7**

hospital beds per 10 000  
(2016)

### Restructuring: target outcomes



Reducing the rates of unnecessary hospitalization



Transition from single-profile specialized hospitals to multi-profile hospitals (target proportion of single-profile hospitals - **10%** by 2025)



Increasing the responsibility of healthcare managers for resource management and modernization of infrastructure



Expanding access to high-technology medical care (along with reducing the average length of hospital stay)



Increasing the economic efficiency and quality of the healthcare system



## PUBLIC-PRIVATE PARTNERSHIPS

### Close cooperation between the public and private sectors

- Reducing the burden on the state budget
- Balancing the risks, responsibilities and rights between the public and private sectors, whilst retaining the leverage of the state
- Involving private partners with a record of successful implementation of similar projects

### Current efforts



Roadmap for the development of PPP and infrastructure, including **91** potential PPP/trust management projects



Developing specifications on **2 BOT** ("build-operate-transfer") projects in collaboration with the Asian Development Bank (ADB)



Implementation of **4 pilot PPP projects** between ADB and The Republic of Kazakhstan



Target number of PPP projects (starting from 2018) - **16**



## Healthcare in Kazakhstan: A Brief Overview

### Editors

**Ainur Aiypkhanova** (aiyp\_a@rcrz.kz)

**Marat Sultanov** (sultanov\_m@rcrz.kz)

**Ayaulym Sagynbayeva** (sagynbayeva\_a@rcrz.kz)

Prepared by  
**Republican Center for Health Development**



**+7 7172 700 950**  
(ext. 1000)



**office@rcrz.kz**