

SITUATION ANALYSIS ON EVIDENCE-INFORMED HEALTH POLICY-MAKING

Kyrgyzstan

EVIPNet Europe Series, N° 4



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ABSTRACT

This situation analysis aims to gather background information on the major factors that may enable or impede evidence-informed health policy-making in Kyrgyzstan. It was conducted according to the WHO situation analysis manual, assessing possibilities for the establishment of a Knowledge Translation Platform (KTP) in the country. A KTP is a national-level entity with the mandate to strengthen the systematic and transparent use of the best available evidence in policy-making to ensure cost-effective use of resources and improve population health outcomes. The platform will build on pre-existing practices. Through a systematic process of assessing factors pertinent to the establishment of a KTP, this report considers the viability of a range of options for structuring a KTP in Kyrgyzstan. It concludes by outlining the most effective form for a KTP in the country and the steps necessary to facilitate its establishment.

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THE EVIDENCE-INFORMED POLICY NETWORK EUROPE

The Evidence-informed Policy Network Europe (EVIPNet Europe) is part of the Knowledge Management, Evidence and Research for Policy-making unit within the Division of Information, Evidence, Research and Innovation at the WHO Regional Office for Europe. EVIPNet Europe situation analyses are documents developed by member countries of EVIPNet Europe. The contents are the responsibility of the authors and do not necessarily reflect the official policies of the WHO Regional Office for Europe.

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ABBREVIATIONS

CHSD&TA	Centre for Health System Development and Technology Assessment (known as the Republican Scientific Medical Library before 30 August 2019)
DFID	Department for International Development (United Kingdom)
EIP	evidence-informed policy-making
EVIPNet	Evidence-informed Policy Network
FAP	feldsher–midwife post
FMC	family medicine centre
GDP	gross domestic product
HPAC	Health Policy Analysis Centre
KfW	German Development Bank
KTP	knowledge translation platform
MHIF	Mandatory Health Insurance Fund
NGO	nongovernmental organization
PHC	primary health care
SA	situation analysis
SRI	scientific research institute
SUN Movement	Scaling-up Nutrition Movement
SWAp	sector-wide approach
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

The Evidence-informed Policy Network (EVIPNet) was established by WHO to promote the systematic and transparent use of data and research evidence in health policy-making to strengthen health systems. The WHO Regional Office for Europe launched EVIPNet Europe in 2012 to support knowledge brokering and evidence-informed policy-making (EIP). Knowledge translation platforms (KTPs) are used to act as an institutional bridge between the research community, policy-makers and other key stakeholders.

The Kyrgyz Republic, as one of the EVIPNet Europe's focus countries, initiated the development of this situation analysis (SA) in 2015 to explore the extent to which EIP takes shape at country level and investigate opportunities to establish a KTP.

The analysis was guided by the EVIPNet Europe SA Manual. Information was gathered from publicly available documents, national laws and regulations in the health sector, papers and reports, and three workshops organized between 2015 and 2016.

General country context

The Kyrgyz Republic is a landlocked and mountainous country in the north-east of central Asia. Almost 90% of the territory is 1500 m above sea level. It borders China in the east and south, Kazakhstan in the north-west and north, and Tajikistan and Uzbekistan in the south and west. The Republic declared its independence on 31 August 1991 after the dissolution of the USSR. In 2018, its gross domestic product (GDP) was US\$ 8.0 billion and its GDP per capita was US\$ 1.277. In 2016 life expectancy at birth was 70.7 years.

The population of the Kyrgyz Republic was estimated at 6 400 000 in 2017. The population as a whole is relatively young, with 34% under the age of 15 years and only 4.5% over 65 years. Despite the relatively young population, it is predicted that, by 2050, the Kyrgyz Republic will have an ageing population, with a high burden of noncommunicable diseases. The average population density is 31/km² but most people live in rural areas with only about one third living in urban areas. The capital and largest city is Bishkek in the north of the country.

The health system

The Kyrgyz health system experienced a severe financial shortage during the period of economic change following independence in 1991. GDP and public sector revenues halved by the mid-1990s, following which both gradually moved into recovery. This situation significantly weakened the ability of the State to fulfil financial obligations in the health-care system.

To address these challenges, comprehensive reforms ranging from changes in clinical practice to changes in the organization and financing of the system are being implemented. The policy programmes (*Manas* and *Manas Taalimi*; sometimes referred to as *Manas I* and *Manas II*, respectively) triggered the reforms.

The most recent programme was approved in December 2018 – Programme of the Government of the Kyrgyz Republic for the Protection of Public Health and the Development of the Health System for

2019–2030: Healthy Person – Prosperous Country (Health 2030). It sets priorities for action, which also take into account the strategic objectives of the Health 2020 strategy of the WHO European Region.

Health information system

Information and communication technologies are being introduced at all levels of the health-care system to enhance monitoring at government level and for the assessment of interventions and decision-making at health sector level. Development partners have largely contributed to the development and implementation of these systems, which are considered important for creating transparency for civil society.

Although the country aims for integrated health information systems, there are issues in achieving this: parallel streams of information collection exist; there are major differences in the validity and reliability of data; and not all data collectors comply with the required standards. Variation in the quality of technological infrastructure across the country impedes prompt information exchange for decision-making, whether for management of facilities or for policy-making.

National health research system

While health systems research remains ad hoc and not systematically organized, there have been attempts to integrate EIP into health research. One such example was the Health Policy Analysis Project, which promoted EIP through enhancing health research (funded by WHO and the United Kingdom's Department for International Development (DFID)).

Currently, a long-term programme for the development of health research is being developed with the involvement of all key stakeholders. In 2013, approximately €7.1 million was spent on research in the medical and health sciences, of which €601 000 was for health research. The major research institutions include the Kyrgyz State Medical Academy, the Kyrgyz Russian Slavic University and the national centres of the Ministry of Health.

EIP processes

The roots for enhancing EIP are found in the *Manas*, *Manas Taalimi* and *Den Sooluk* programmes, which also paid special attention to processes of monitoring and evaluation. The impact of international donors on stimulating EIP from the beginning should be stressed. In practice, sustainable institutionalization of EIP is still a work in progress, and institutionalized capacity in knowledge translation or brokering is lacking.

A legal and regulatory framework has been created to provide the basis for institutional development of EIP, but currently there is not the capacity to effectively and systematically present evidence at the policy level.

The health policy-making process in the Kyrgyz Republic is regulated by the recently approved Health 2030. Health 2030 states that health policy should be supported by strong evidence, although this is not yet fully operational.

The draft Government decree on the methodology of implementing a monitoring and evaluation system during the implementation of Health 2030 involves all stakeholders, from local government through to ministries and departments at national level. It will involve members of the *Jogorku Kenesh* (Kyrgyz Parliament) and will be coordinated by the Deputy Prime Minister for Social Affairs.

EIP institutionalization considerations

Opportunities and challenges can be identified in the Kyrgyz Republic for the institutionalization of a knowledge translation platform (KTP), which promotes and creates an institutional environment that supports both research use in policy-making and policy needs in research design (see below for the full description). At this stage, an infrastructure or platform is being created in the country to narrow the policy–research gap in a systematic and sustainable manner.

Conclusions and next steps

Concrete recommendations have been made based on the SA. A KTP is considered as a national entity designed to create and nurture links among researchers, policy-makers and other research users; these links draw the research and policy communities closer together to ultimately create cycles of policy-informed evidence and evidence-informed policy.

1. INTRODUCTION

1.1 EIP and EVIPNet Europe

EIP aims to develop stronger health systems and outcomes, as well as to reduce inequalities globally (1). In doing so, EIP is promoted in the formulation of policies to improve the health of individuals and populations through the use of the best available evidence.

EIP embodies three of the six core public health functions of WHO: shaping the research agenda; stimulating the generation, translation and dissemination of valuable knowledge; and articulating ethical and evidence-informed policy options (2). Actions specifically targeted at “bridging the gap between knowing what to do and actually doing it” (2) have been emphasized in numerous WHO resolutions, including the Mexico Statement on Health Research (3), the Fifty-eighth World Health Assembly resolution WHA58/24 (4) and the Bamako call to action on research for health (5). EVIPNet was established in 2005 by WHO to promote the systematic and transparent use of data and research evidence in health policy-making to strengthen health systems (6). The EVIPNet 2012–2015 strategic plan (7) states the network’s mission as

to promote a network of partnerships at the national, regional and global levels among health systems policy-makers and other stakeholders (including civil society, health professionals, health managers, researchers and funders) to strengthen health systems and improve health outcomes through regular access to, assessment, adaptation and use of context-specific research evidence.

EVIPNet operates on three levels. The first is the country level, which brings together key national stakeholders in the form of country teams (so-called KTPs) that plan, implement, monitor and evaluate research-to-policy activities. Primarily, these teams produce evidence briefs for policies in line with national health policy priorities and facilitate the organization of policy dialogues. The second is the regional level, where countries exchange experiences and lessons learned. The third is the global level of coordination and support carried out by WHO (7,8).

The WHO Regional Office for Europe launched EVIPNet Europe in 2012 to strengthen and institutionalize EIP capacity at country level within the European Region (9). The network now comprises 23 network member countries¹ with a geographical focus on central-eastern European and central Asian countries. Network member countries are requested to perform a country SA to map and assess the context of EIP in the country and identify opportunities to establish a national KTP (10).

KTPs bring together key stakeholders to institutionally promote the interactions between the research and policy communities to improve health policy formulation and implementation (Box 1). To ensure sustainability and effective research-to-policy activities, the form and function of KTPs should be adapted to the relevant political, social and scientific context of a country, as well as to the specific institutional system and decision-making mechanisms (9).

1 Albania, Austria, Azerbaijan, Bulgaria, Estonia, Georgia, Greece, Hungary, Lithuania, Kazakhstan, Kyrgyzstan, North Macedonia, Poland, Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Turkey and Ukraine.

Box 1. What is a KTP?

A KTP serves as an organizational knowledge broker. It is “designed to create and nurture links among researchers, policy-makers and other research-users; these links draw the research and policy communities closer together to ultimately create cycles of policy-informed evidence and evidence-informed policy” (8,10).

A KTP may be a stand-alone organization, part of an existing one or a network of individuals or organizations. EVIPNet set six strategic objectives that a KTP pursues (7):

- improve the culture for and practice of research evidence creation, adaptation and use;
- influence processes and mechanisms supporting the prioritization of timely and relevant research evidence;
- package and disseminate research evidence;
- convene national dialogues about priority health challenges;
- enhance capacity to find and use research evidence; and
- catalyse knowledge transfer at national level.

1.2 Support for the implementation of EIP in the Kyrgyz Republic

The Kyrgyz Republic is a low-resource country with an urgent will to create better conditions for its population. Strongly supported by international development agencies, the issue of governance has become one of the most important issues in the overall development of the country, mainly in terms of increasing public sector accountability and transparency but also in strengthening public resource management.

The country is struggling with many problems in obtaining and using evidence and health information in a methodological sound way, and it seeks models and approaches to improve capacity at different policy implementation levels and in the research community (11). The involvement of the country in EVIPNet Europe is in line with this overall process. The country seeks to develop a capacity to bring the available evidence in suitable formats to policy-makers and, therefore, needs to learn from EVIPNet partners on how knowledge translation and knowledge brokering can be integrated into national health policy-making processes. The involvement with EVIPNet Europe is also inspired by a clear demand from the country for international support to enhance local capacity in EIP and knowledge transfer in health to optimize its health infrastructure (Order of the Ministry of Health of the Kyrgyz Republic of 25 August 2016 No. 657). The cooperation with EVIPNet Europe is seen as a stepping stone to better use both international and local evidence in current health policy, public health and clinical practices and to share international experiences.

The establishment of a KTP, as promoted by EVIPNet Europe to institutionalize EIP, has been welcomed by all stakeholders in the Kyrgyz Republic and considered an important way to strengthen capacity in both research and EIP (Order of the Ministry of Health of the Kyrgyz Republic No. 657). Moreover, it is seen as an important institutional model to enhance dialogue with all stakeholders and integrate available evidence in problem scoping and for the implementation of further health reforms (12). The stakeholders see concrete opportunities to establish a KTP within the implementation framework of Health 2030 (12).

The Kyrgyz Republic’s aim is to engage in a process of health improvement and health-care development for its population, grounded in new and innovative ways of developing health and health-care policies. In an era of limited financial resources, the implementation of EIP is expected to lead to more efficiency and rational health system decision-making. Some initial experiences in the Republic, such as the

programme for improving inpatient care for children (13,14) and using research in introducing rotavirus vaccination (15), support these expectations and enhance the demand for the country to engage in this process.

1.3 Preparing the establishment of a KTP

Guidelines on the establishment of a KTP recommend the first step as being the compilation of a SA of current EIP activities and practices within the country, as well as realizing the potential for development and expansion. An SA country team was established in 2015 by the Ministry of Health to perform the assessment. This team included representatives of the Ministry of Health, experts who was trained at the EVIPNet Europe multicountry meeting in Trakai, Lithuania (16), and representatives from various research institutes, scientific centres, universities and professional associations with relevant experience in the fields of research, preparing clinical guidelines, developing national and state programmes, and regulatory and legislative documents in the field of health. During 2015, the SA country team held regular meetings during which issues related to various aspects of the KTP were discussed (17). In this initial stage, major emphasis was placed on clarifying the objectives of the SA and transforming it into a feasible strategy to collect information, adapted to the local context as well as to the available time and resources.

This SA was developed according to the draft version of the EVIPNet Europe SA Manual (10), with the methodological processes detailed below. Significant support on conducting the SA was provided throughout the process by the WHO Secretariat of EVIPNet Europe and the Chair of the EVIPNet Europe Steering Group, as well as the WHO Country Office in the Kyrgyz Republic. The document provides background information on the general country characteristics (population, governance, socioeconomic situation), health system characteristics, the health research system and the current interaction between policy-makers and researchers.

1.3.1 Methods

The following key sources were used for data collection: published literature, relevant websites, and interviews with relevant personnel and seminars. The collected data were analysed and synthesized by one person. This information was discussed in (virtual) consultations and meetings with all members of the SA country team.

Published literature and websites. Data were identified from scientific journals, media reports, research reports and official websites of organizations in the health, education and science sector. Other publicly available policy documents were used, including current laws and regulations that define both national and sectoral policies (18–20), strategic national development documents (e.g. the Country Development Strategy 2007–2010 (21) and the National Sustainable Development Strategy for the Kyrgyz Republic 2013–2017 (22)) and documents specifically related to the health sector (national health reform programmes Manas, Manas Taalimi and Den Sooluk). Some background information was collected from reports from international organizations (e.g. the Organisation for Economic Co-operation and Development and the World Bank) assessing aspects of the Kyrgyz Republic considered relevant to the SA.

Seminars. The launch event for the EVIPNet Europe SA was organized in the context of a seminar on a draft SA report on 25 September 2015, based on the instruction of the Ministry of Health No. 638 as of 14 September 2015. The seminar was attended by 25 key stakeholders. Representatives of the medical scientific community were informed about the EVIPNet Europe initiative and discussed the preliminary SA information. In a follow-up seminar on 4 December 2015, a preliminary version

of the SA report was presented and deliberated with those attending the event. The findings of this seminar were included in a revised version of the SA report.

After the initial high pace of conducting the assessment, the process to finalize the SA report slowed down for a number of reasons (mainly staff turnover in the WHO Country Office and the country team and a shift in country priorities). The various consecutive next steps in connection with the SA further development were undertaken as follows:

- The SA process was reactivated in the second half of 2016;
- First draft of the SA in Russian prepared;
- An English translation was reviewed by the WHO Secretariat of EVIPNet Europe and the Chair of the EVIPNet Steering Group for feedback;
- The revised SA report was presented during a meeting attended by the Kyrgyz State Secretary for Health in February 2018;
- The country team met again in May 2018 to discuss and finalize the SA report with the support of the Chair of the EVIPNet Europe Steering Group. During this stage, some new policy and research developments from the first half of 2018 were integrated to update the SA.

Annex 1 outlines the lessons learned during production of this SA that may be of use to those producing an SA elsewhere.

1.4 Structure of the report

The SA report is structured into the following chapters. Chapter 2 describes the national country context. Chapter 3 provides an overview of the health system in the Kyrgyz Republic, in particular health services provision, quality and accessibility, health financing and health management. Chapter 4 reviews the national research system in the health sector. Chapter 5 assesses the interaction between research and policy and describes organizations involved in the development of EIP. Chapter 6 reflects on these findings, while Chapter 7 discusses options for the establishment of the KTP.

In several chapters, summary boxes have been added to outline the key challenges and opportunities when considering how to establish a KTP in the Kyrgyz Republic.

2. GENERAL COUNTRY CONTEXT

This chapter introduces a general understanding of the country context and population, its political structures and policy-making and provides a general description of key social, public health, socioeconomic and cultural characteristics of the Kyrgyz Republic. It also describes relations between policy domains, centralized and decentralized policy structures and general relations between State and non-State entities.

2.1 Country context and population

The Kyrgyz Republic is a landlocked and mountainous country in the north-east of central Asia. It borders China in the east and south, Kazakhstan in the north and north-west, Uzbekistan in the west, and Tajikistan in the south and west. Its capital and largest city is Bishkek. Bishkek and the surrounding areas in the Chui Oblast in the north of the country are better developed economically than outlying areas.

The Kyrgyz Republic is a relatively young country, having declared its independence on 31 August 1991 after the dissolution of the USSR. In 2018, GDP was US\$ 8.0 billion and GDP per capita was US\$ 1.277. In 2016 life expectancy at birth was 70.7 years (20).

The population was estimated at 6 140 000 in 2017 with 34% under the age of 15 years, 59.1% of working age and 4.4% over 65 years (23,24). At the beginning of 2016, 5.3% of women and 3.5% of men were over 65 years of age (25). Only around one third of the population (33.8%) live in urban areas. The average population density is 31/km² (23,24). Despite its current relatively young population, it is forecasted that the Kyrgyz Republic will have an ageing population by 2050, with a high burden of noncommunicable diseases (12).

The stable reduction of general and infant mortality has led to a slight increase in life expectancy at birth, in both men (67.0 years in 2016) and women (75.1 years in 2016). The gender gap in the average life expectancy is 8 years (26).

In 2016, the population growth was 2.0%, which is relatively high (26). Population growth reflects not only natural growth but also changes in the birth and death rate and immigration. In 2016, the total mortality rate was 5.5 deaths per 1000 population; the standardized death rate was 9.9 deaths per 1000 population, which is higher than the European average of 7.4.

2.2 Socioeconomic conditions

The Kyrgyz Republic is a low-resource country that experienced major economic and social impacts from the dissolution of the USSR (22,27). The loss of Soviet subsidies and the breakdown of established Soviet trading markets affected the Kyrgyz Republic severely and there was a considerable reduction of the industrial and manufacturing sectors. The country relied heavily on external borrowing and its economic situation deteriorated, which led to a rise in already high poverty levels (see section 2.4). The country also suffered from economic crises in the 1990s and the early 2000s.

The Kyrgyz Republic has a predominantly agricultural economy (cotton, tobacco and hides), with some services, some gold mining and light industry. The economic performance at the end of the

1990s was gradually improved by agricultural sector reforms (land redistribution, price liberalization, restructuring of State-owned farms, etc.) (21).

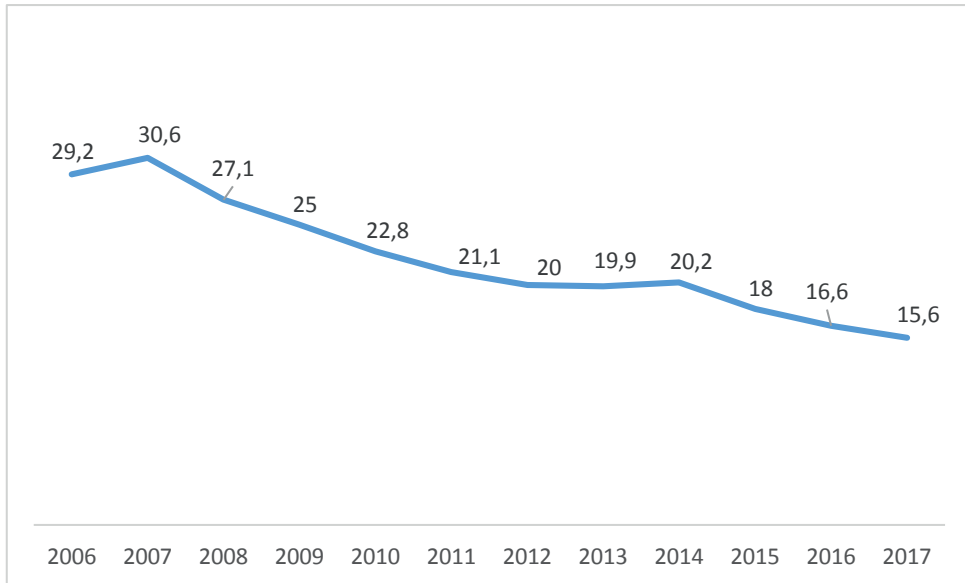
Migration has been a key feature of the country. Emigration peaked during the early period of the transition when socioeconomic conditions deteriorated. Small and medium-sized cities experienced de-urbanization due to economic collapse, while Osh and Bishkek saw inward migration and intensive urban growth. During certain periods, the growing demand for housing and the lack of affordable housing caused acute problems in these areas and had an impact on settlement development and land use around the cities. A number of these settlements lacked social infrastructure such as water supply, roads, schools, health care and other public utilities. However, policies have since been put in place to integrate these settlements into city development planning. In 2010, ethnic conflicts also had an impact on migration in the south of the country (38).

Overall poverty in the country has long been a major problem. In recent years, some positive changes have occurred. The level of poverty in 2016 calculated on consumer spending for the whole country was 25.4%, a decrease of 6.7% from the previous year and of 12.6% from 2012 (38%). The level of poverty decreased by 4.6% in rural areas and by 10.7% in urban settlements. Officially registered unemployment also fell in the period 2012–2016 (8.4% in 2012 and 7.2% in 2016). The level of extreme poverty in 2016 was 0.8%, a decrease of 0.4% from that in the previous year. The level of extreme poverty decreased by 0.7% in urban settlements and by 0.3% in rural areas. In 2016, 49 000 people were living below the extreme poverty line, of whom 85.4% were residents of rural settlements (28).

2.3 The health of the population

The main cause of deaths is cardiovascular diseases (279.7 per 100 000 in 2016). About 80% of these deaths are in people older than working age. The second most common cause of death is cancer (64.4 per 100 000 in 2016). Injuries, poisoning and external causes are the next most common causes of overall mortality (45.7 per 100 000 in 2016). About 30% of these deaths are from traffic accidents. Diseases of the digestive and respiratory system (6% in 2016) rank fourth. There has been a reduction in deaths from some infectious and parasitic diseases but deaths from tuberculosis are a main contributor to this last group (10.8 per 100 000 in 2016). Maternal mortality remains high; in 2016 48 women died from the complications of pregnancy, childbirth and the postpartum period: 30.3 women per 100 000 live births (23,24).

Infant mortality remains high in spite of a noticeable reduction in the last few years: 15.6 children per 1000 live births (Fig. 2.1). The main causes of infant mortality are diseases and conditions that occur in the perinatal (postnatal) period (33.1%), congenital malformations (24.3%), pulmonary organ diseases (22%), some infectious and parasitic diseases (9.8%) and accidents (5.1%) (29).

Fig. 2.1. Dynamics of infant mortality rates per 1000 live births, 2006–2017

Source: National Statistical Committee of the Kyrgyz Republic, 2019 (23,24).

Poverty has a major impact on health status (e.g. nutritional status and, anaemia). Lack of finance also has a negative effect on access to health care (30). Compared with the poor, affluent households spend significantly more on health-related expenses such as medicines, hospitalization and outpatient treatment. Apart from these costs, the poor report less need for health services compared with the most affluent groups. The lower demand is probably the result of the poor quality of services and low overall accessibility of health services for the poor owing to geographical and financial barriers, especially in rural areas. Indications are found that, among the poorest, more individuals did not use health services for financial considerations, even though the services were needed (30).

There are challenges with the availability of medical services despite the fact that the percentage of people with health needs, but without access to health services significantly decreased from 11% in 2000 to 3.5% in 2014. In 2014, 46% of the population who received medical services reported that it was “difficult” or “very difficult” for them to find money to pay for these. In 2009, this figure was 38%. From 2009 to 2014, people began to use more of their savings, reduced their food consumption or sold livestock to finance needed medical services (31).

2.4 Policy stakeholders and the policy-making process

The country experienced popular revolutionary movements in 2005 and 2010 that took the country’s first two post-Soviet presidents from power. These were triggered by reactions to acute poverty and pervasive corruption and served as a catalyst for eventual reforms. After the events of April 2010, a national referendum endorsed a new Constitution that defined the parliamentary form of government. In June 2010, an ethnic conflict took place in the south of the country with hundreds of deaths and several thousand injured. The Government was able to stabilize the situation with the support of the international community and steered the Kyrgyz Republic to become the first parliamentary republic in central Asia. The Kyrgyz Republic is now a unitary, democratic, parliamentary republic built on the principles of a legal secular state.

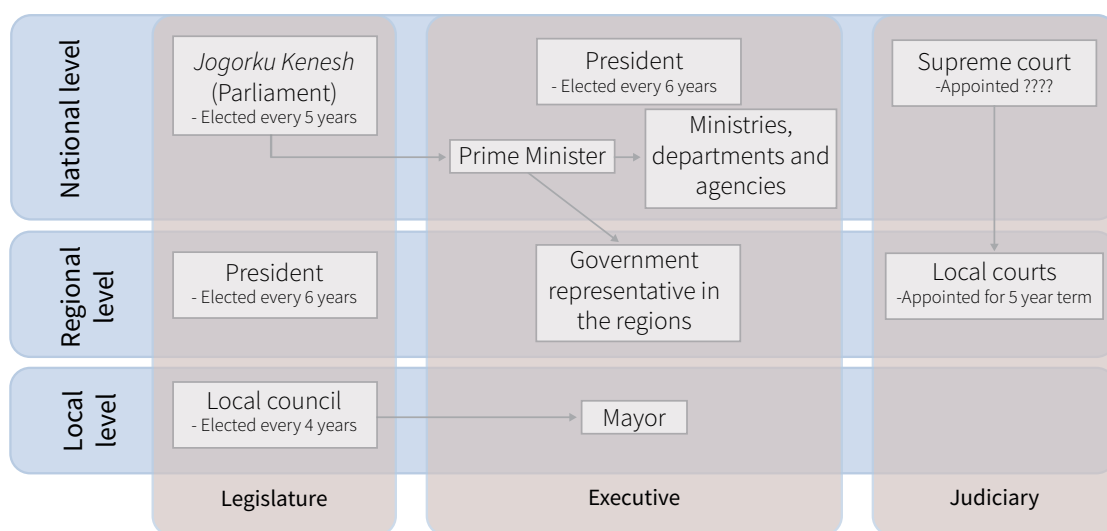
The Kyrgyz Republic is administratively divided into seven regions (*oblasts*) and two large administrative cities (the capital, Bishkek, and the city of Osh). Each *oblast* is organized into seven or eight districts

(*rayons*), administered by government-appointed officials. Rural communities (villages) consisting of up to 20 small settlements have elected mayors and councils (11).

The President of the Kyrgyz Republic is elected by popular vote for six years, without the right to re-election for a second term. The President is supported by an Office, which includes the Department of Social Policy, dealing with policy issues in the health, education and science domains.

The *Jogorku Kenesh* (Parliament) of the Kyrgyz Republic decides and adopts the most important decisions and policies of the State and controls the implementation of its laws and decisions. It is unicameral and consists of 120 parliament members; it is elected by party lists for five years. The head of government is the Prime Minister, appointed by the *Jogorku Kenesh* on the recommendation of the parliamentary majority faction (Fig. 2.2).

Fig. 2.2. Structure of political power in the Kyrgyz Republic



Source: Authors' own compilation

International donors (development partners) have been fairly important in setting directions for the policy agenda. Political processes are affected in some ways by development partners, who are encouraging the country to engage in good governance practices and accountability. In the early days of international donorship, donors tended to have a significant influence on priority setting, but this has now changed, with more autonomy given to national priorities (12).

The National Sustainable Development Strategy for 2013–2017 (22) and a longer-term development strategy for the country until 2040 have been developed on the initiative and direct participation of the Office of the President of the Kyrgyz Republic. The fight against corruption is identified as a key objective of the National Sustainable Development Strategy (22). This Strategy demonstrates the importance given by the Kyrgyz Government to its anti-corruption agenda and its attempts to be transparent in revealing the extent of corruption and its impact on the poor. However, studies indicate that a vast majority of people still perceive corruption as a problem in the Kyrgyz Republic, especially the level of bribes and informal payments needed to obtain public services (32). Despite political rhetoric, the Kyrgyz Republic still has high rates of households having to utilize bribery to gain access to public services, and corruption is even more pronounced in the country's traffic police (11,32,33).

Although political changes are being made and go hand in hand with peaceful transitions of power through elections, there is still room to enhance the quality of political competition. The presence of multiple parties in the *Jogorku Kenesh* has not yet resulted in a true political pluralism (34). The media is considered as free but is often subject to lawsuits or pressure for self-censorship. There are still indications documented by international observers that political motives pervade the justice system, especially in situations of political rivalry during or immediately after election periods (35,36).

Public administration in the Kyrgyz Republic has been subject to a process of continuous reforms. Despite reform attempts, public administration still provokes public resentment and is perceived as not delivering adequate services (37). The system suffers from high staff turnover at all levels. Public administration is clearly in a transition period but while the form changes, very often the methods and practices of decision-making and implementation remain almost unchanged. It is recognized that governance reform measures are still inadequate in bringing governmental operations into compliance with the requirements of a state governed by law. Although changes were well intended, they were not true reform for ministries and agencies, mostly lending a new appearance to old content (38).

Communication between central and local authorities remains weak and ineffective, and the resources of most local authorities are limited, hampering them in fully implementing their functions and powers (22).

A key challenge is to improve the implementation of changes and new laws about governance at the levels of government and municipal authorities. Plans are being proposed for improving legal literacy among government and municipal officers and their professional education and training system. It is hoped that these plans will strengthen and develop vertical and horizontal communications to ensure efficient, effective and coordinated operations among central and local government agencies, local administrations and self-governing bodies (22,38).

It is also recognized that increased collaboration with civil society, the inclusion of citizens and their associations into discussions and making coordinated decisions that include the public should become integral elements of the work of public authorities and their officials. The public should be constantly informed about the work of public authorities. These issues still need to progress and a more effective and professional State apparatus is required that provides quality services to the population, that resists corruption and that has the confidence of society (22).

2.5 The role of civil society in the policy-making process

In the Kyrgyz Republic, traditional forms of association play a significant role, particularly family and clan linkages. Consensual decision-making, such as the election of leaders and the negotiation of pasture land, is embedded in the organization of society. Historical institutions for decision-making included the aksakal (elder's council) and traditional practices like ashar (voluntary labour from the community for the community). This was the case even during the Soviet centrally steered approach. During the early 1990s, independence and economic crisis went hand in hand with rapid growth in the nongovernment sector through the sudden availability of external funding and the State's inability to address the increasing levels of poverty. International donors focused their approach explicitly on developing civic society organizations or on capacity development within civil society (38,27,39). The explosive growth of nongovernmental organizations (NGOs) certainly contributed to civic participation in the policy-making process compared with other central Asian countries (40). Many international projects and initiatives have supported and strengthened the participation of civil society and NGOs.

Formally, the involvement of civil society in policy-making is regulated by the Law on Regulatory Legal Acts of the Kyrgyz Republic. According to this Law, all normative documents directly affecting the

interests of citizens and legal entities are expected to be subject to public discussion. However, this is generally limited to dissemination on the websites of government organizations or publication in the media and subsequent collection of suggestions from the public. This approach does enable civil society to take part in policy-making, but the degree of involvement depends on the awareness of citizens and NGOs about the process of developing policy documents. Involvement is often strongly hampered by a lack of financial means to implement the participation process (40).

However, it should be recognized that in recent years the participation of the Public Council of the Ministry of Health of the Kyrgyz Republic, which includes representatives of civil sector, is gaining momentum in the work of the Ministry of Health, especially when it comes to political decision-making (41).

Summary box. Key opportunities and challenges for a future KTP considering the general country context

OPPORTUNITIES PROVIDED BY A KTP	CHALLENGES FOR A FUTURE KTP
<ul style="list-style-type: none"> ❑ A KTP can support the process of decision-making in line with the recent political documents and with the demand of members of <i>Jogorku Kenesh</i> on EIP for health. ❑ A KTP can further encourage the existing trend of engaging civil society in health policy-making and contribute to the improvement of policy decisions and transparency, leading to an increase in the level of public trust. 	<ul style="list-style-type: none"> ❑ Implementation of rigorous policy analysis is restricted by limited knowledge and means. ❑ High staff turnover and political instability may threaten sustainability.

3. THE HEALTH SYSTEM

This chapter focuses on the health system and health policy-making in the Kyrgyz Republic, including the major actors that are involved in shaping the health policy-making process. The aim is to examine the features of the health system, including health policy-making processes; the general characteristics of service delivery (infrastructure); health workforce; health financing (health and social insurance); and leadership and governance. It also identifies the main health system reforms and priority policy issues where research is likely to be demanded by the Government. The last section offers insight on how reforms have affected the country's policy priorities and how they could influence EIP processes and the need for a KTP.

3.1 Governance and service providers

3.1.1 Health policy-making and implementation

The structure of the Kyrgyz Republic is determined by the Constitution, which was adopted on 27 June 2010. This new Constitution defines the form of government of the Kyrgyz Republic as a parliamentary republic (see section 2.4) (42).

The organizational structure of the health-care system of the Kyrgyz Republic, established in the years of independence as a result of cardinal reforms, is currently defined by three basic laws: the Law of the Kyrgyz Republic of 13 August 2004 No. 116 on Healthcare Organizations in the Kyrgyz Republic, the Law of the Kyrgyz Republic of 9 January 2005 No. 6 on Healthcare of Citizens in the Kyrgyz Republic, and the Law of the Kyrgyz Republic of 24 June 2003 on the Single Payer System in Financing the Health Service of the Kyrgyz Republic. Based on these Laws, an integrated health system was formed, consisting of public and private sectors.

Health policy development and implementation occur at four levels of governance (42).

The general policy level. The Office of the President and the *Jogorku Kenesh* undertake overall (budgetary) control over the implementation of State policy. If necessary, they take measures to improve policies, planning and implementing in the health sector.

The health policy level. The Government of the Kyrgyz Republic, the Ministry of Health and the Mandatory Health Insurance Fund (MHIF) bear responsibility for implementation of State policy in the health sector. In addition, the Ministry of Finance sets and distributes departmental budgets, with implications for the implementation of health policy.

The advisory and implementation level. Recommendations and policy advice on health matters are often provided by national centres. Vertical programmes (in particular health issues) are developed by the National Academy of Sciences, national centres, SRIs, higher educational institutions and the Higher Attestation Commission.

The implementation level. The implementation of the annual health action plans is carried out by the seven *oblasts*. The directors of the oblast family medicine centres (FMCs) function as the regional coordinators, who are responsible for the implementation of national sectoral health programmes for the *oblast* population. They should also formulate recommendations for local health policies based on monitoring of the health status of their *oblast* population. In theory, they are expected to analyse the provision of services, but this is still not well developed. On a lower *rayon* level,

there are separate coordinators of FMCs, who collect data and write local reports to monitor the health status of the local population.

The Ministry of Health is present in many of the above levels as it is responsible for developing and implementing the State policy on (i) improving quality and ensuring population's access to health services, (ii) public health, (iii) development of public–private partnerships in the field of health care, and (iv) improvement of budgetary–insurance medicine (Law on Healthcare Organizations of 2004 and Law on Healthcare of Citizens of 2005).

3.1.2 Reforms in the health system

The Kyrgyz health system is historically rooted in the Soviet *Semashko* system, which involved large numbers of hospitals with different medical specialists and specialized doctors working in remote village hospitals. Cities had their structure of health service provision, and different ministries also had their own specialized hospitals (43). In the 1990s, reform to a market economy and a serious economic crisis resulted in a decline in overall public spending on health, and the State could no longer support the hospital-based extensive health-care system. Alongside this the cost of key goods and services to ensure the activities of health facilities, such as medicines and electricity, increased (33). To address the emerging structural problems, reform programmes were launched from 1996, supported by development partners (e.g. the German development agency Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the German Development Bank (KfW), the Swiss Embassy in the Kyrgyz Republic, the United Nations Children's Fund (UNICEF), the United Nations Population Fund, the United States Agency for International Development (USAID), WHO and the World Bank). The reform programmes aimed at decreasing the number of hospitals, moving care towards primary health care (PHC) and tackling the problem of informal payments. Reforms were intended to preserve the system of State-provided health care with universal health coverage and accessibility, at the same time making the best use of public spending.

Three consecutive major health programmes should be mentioned.

Manas. This was the National Health Care Reform Programme 1996–2006 (44), which focused on:

- reforming the health service delivery system by strengthening PHC, developing family medicine and restructuring the hospital sector;
- reforming health financing (outcome-based payment methods; increasing funding for medical education and the development of human resources; subsidizing the provision of certain pharmaceuticals; financing the expansion of health and care services; investing in the improvement of public health); and
- introducing new health management approaches that would give greater autonomy to health facilities.

Manas Taalimi. The National Health Care Reform Programme 2006–2011 (45) aimed to build on the results of *Manas*, while encouraging more active involvement. The main goal was to improve the health status of the population through the creation of a responsive, efficient, comprehensive and integrated health system and through increased responsibility of individuals, society and national authorities for population health. It aimed at improving equity and accessibility of health services, reducing the financial burden on the population, increasing the effectiveness of the system, continuing quality improvement for services and improving the transparency in the system.

Den Sooluk. The National Health Care Reform Programme of 2012–2018 aimed at enhancing conditions for service providers to manage their activities and improve the quality of services (46). It encompassed two pilot projects: the World Bank's Results-based Financing and the Swiss

Embassy's Health Facilities Autonomy in the Kyrgyz Republic. *Den Sooluk* focused on four priority health areas: cardiovascular diseases, maternal and child health, tuberculosis and HIV infection. It sought to provide expanded coverage of the population with key services, improve the quality of medical care and eliminate barriers in the health system that had not been addressed in the framework of previous programmes.

In 2017, a follow-up health-care delivery policy was prepared for the period 2019–2030 with the goal of strengthening people-centred systems that ensured public health and delivered quality services. The programme aimed to maximize health outcomes for the population and individuals, reduce health inequalities and provide financial protection. It was approved by Government Decree No. 600 on 20 December 2018 (12).

While the reforms supported changes in important directions, one of the major impediments has been the problem of stewardship by the Ministry of Health in reaching out to subnational levels. An initiative has been launched to use a payment-for-performance approach to strengthen the coordination and implementation of the reforms by *oblast* health coordinators and their teams. The MHIF will channel funds for the current coordination functions and for incentive payments based on *oblast* coordinators' performances, while the Ministry of Health will provide coverage of verification costs and, if necessary, separate payments for the coordination functions (12).

3.1.3 Involvement of the population in health policy-making and implementation

One of the goals of the reform plans was to develop new approaches to involve the population and to promote partnerships to identify health priorities for communities, population groups and individuals (45). The plans supported patients' organizations, developed the interaction between village health committees and health organizations, established public consultative committees and worked with social protection associations. Pilot programmes initially financed under the Kyrgyz–Swiss Health Reform Project in two *oblasts* were eventually recognized by the Ministry of Health as the main mechanism for long-term community mobilization and health promotion across the country (47). Key partners were the Ministry of Health, the PHC organizations and the health promotion service. The programme has been recognized as one of the most successful by both the Kyrgyz Republic and its development partners. Village health committees have joined in a country-wide association and collaborate closely with the Health Promotion Centre of the Ministry of Health. The association also collaborates with development partners and coordinates with the Health Promotion Centre (e.g. on communication materials on HIV/AIDS) to guarantee that actions remain coherent with the policy set by the Ministry of Health. The materials developed are approved by an expert council of the Ministry of Health (47).

3.2 Health system financing

The various health reform programmes introduced changes in the financing mechanisms for the health system and aimed to create transparent, equitable and sustainable financing.

- Since 1996, the Single Payer System and the Co-payment System have been introduced. A clear separation is made between payers and providers. The country has gradually moved from subsidizing the supply of services to subsidizing the purchase of services. New financing mechanisms include case-based financing (with funding based on the specific cases treated) at the level of hospitals and per capita funding for PHC (11).
- The MHIF, established in 1997, has a central role in executing health financing as the single purchaser. The quality of the medical care provided is significantly influenced by the MHIF,

which is the single payer and has tools to develop pay for performance. Mandatory health insurance was also a stepping stone towards a monitoring system of provision and quality of medical services, including the compliance of services with clinical guidelines and patient satisfaction (48).

- In 2001, the State Guarantees Package was introduced, which guarantees free PHC from a contracted family group practice or FMC where the insured person is enrolled. A formal co-payment is needed for hospital inpatient care on referral. The State Guarantees Package includes a list of people who are eligible for free or nearly free provision of health care (i.e. exempt categories based on individual or disease-specific characteristics, such as Second World War veterans, low-income pensioners, those with cancer or tuberculosis). The mechanism also provides access to the Additional Drug Package for outpatients (49). By increasing the transparency of the co-payment system and by improving the flow of resources to health-care providers, it was hoped that the health financing reforms would reduce or even eliminate informal payments, particularly in hospitals, where demand for payments by health workers was common practice (11).
- The High Tech Fund for expensive types of medical care within the Ministry of Health is intended to make high-technology and expensive care more available for the population through partial or full coverage of the costs. The High-Tech Fund receives its funding from the State budget (50). Those needing expensive high-technology care can obtain funding from other sources as long as this does not contradict the purposes of High-Tech Fund and is not prohibited by national legislation (50). For 2016, out of the planned budget of 201.4 million soms, 94% (188.5 million soms or US\$ 2 772 059) came from the State budget. However, some experts participating in the SA stakeholder consultation cited evidence that the choice of technologies is not always rational, which can be detrimental to the usage of better high-technology diagnostic methods. These methods would help to prevent and treat many other diseases that are the main causes of death in the country and that could be prevented with adequate preventive and diagnostic technologies (51).

The changes in the health financing model aim at more transparent, equitable and sustainable financing of the health sector with the possibility of ensuring an even distribution of resources, balancing State obligations under the State Guarantees Programme and other priority programmes, and reducing the financial burden for effective and rational use of health resources. However, it is also believed that the money tends to concentrate in the larger hospitals, which are usually located in large cities, and so financing tends to favour urban areas. Moreover, while out-of-pocket health expenditure reduced the financial burden for providing health services in the early years of reform, this trend seemed to reverse after 2009. The rate of out-of-pocket spending accelerated, increasing much faster than the total per capita household budget, in particular for the two poorest groups in the population and in the two largest cities, Bishkek and Osh. Spending on outpatient medicines (prescribed and not prescribed) is the driver of out-of-pocket expenditure. Informal payments (during hospitalization), although not a big portion of out-of-pocket costs, have followed very similar trends as the total out-of-pocket expenditure (33,52).

3.3 Delivery of health services

Health-care facilities are subdivided administratively into republican, *oblast*, city, *rayon* and village facilities. There is also a division of level of care: PHC, secondary care (*oblast*, *rayon* and city hospitals) and tertiary care (specialized republican, national centres, SRIs). Services are also provided by public health organizations: the Department of State Sanitary–Epidemiological Surveillance, which is part of the Ministry of Health; the Health Promotion Centre, which is autonomous within the Ministry of Health;

and the Immunization Centre, which operates autonomously but is formally part of the Public Health Institute (53). This has led to the fragmentation of public health provision, which poses a challenge in the improvement of public health.

3.3.1 PHC

PHC in the Kyrgyz Republic has progressively advanced under the three national health-care reforms: *Manas* (1996–2006 (44)), *Manas Taalimi* (2006–2010 (45)) and *Den Sooluk* (2012–2018 (46)). PHC facilities should provide quality curative, preventive and infectious disease care to the population. The facilities should also organize health promotion through educational work to promote health and sanitary and hygiene education (54).

PHC is carried out in 28 centres of general medical practice in smaller *rayons* (which also have hospital beds), 64 FMCs and 1041 *feldsher*–midwife posts (FAPs) in small villages and remote areas but attached to the FMCs.

FAPs are the first point of contact with the health system for patients in rural areas. They were established under the *Semashko* model to serve small villages and remote localities with populations between 500 and 2000 people. They are staffed by at least one health worker, called a *feldsher*. A *feldsher* is a health-care professional who provides services such as emergency treatment and ambulance practice, PHC, antenatal and postnatal care, basic curative care, vaccinations and health promotion, plus sometimes basic surgical care. In larger villages, the FAP may also have a midwife and a nurse. Women in labour are referred to the district level hospital or to general medical practice. FAPs were formerly subordinate to central *rayon* hospitals, but after implementation of the *Manas* programme, they have report to either family group practices or FMCs in their *rayon* (11).

FMCs are the largest outpatient health facilities in the country and were placed in each *rayon* and *oblast*. FMCs provide care for children, certifications, family planning, first aid, home visits, minor surgery, obstetric care, perinatal care, prescriptions and rehabilitation, plus preventive and health promotion services. They employ a range of specialists. FMCs are associations of physicians, including therapists, paediatricians, obstetrician–gynaecologists and family doctors; nurses; and managers. They provide PHC to all members of a family. Taking into account the age and sex composition of the population served, one family doctor is envisaged for 1000–2500 people (11,55).

General practice centres have been created by merging territorial hospitals with PHC facilities. Since 2006, 28 such general practice centres have been established in remote areas of the country. The main reasons for this decision were the lack of financial resources in hospitals in remote areas (because the small patient volume did not generate sufficient revenue under the new case-based provider payment system), a lack of human resources (health professionals moved to urban areas and few new graduates willing to work in remote areas), and inadequate equipment and a lack of ambulances to reach those living in remote areas. The general practice centres combine primary and outpatient care services, ranging from general medical care to specialized care and diagnostics, including radiography and ultrasound (56).

PHC is funded through budgetary allocations, funds received under contracts from the MHIF and other sources not prohibited by legislation. The latter will include activities performed under a fee-for-service approach or local initiatives from donors, sponsors or investors (e.g. a mining company making investments in infrastructure) (57).

Local health NGOs, for example the village health committees, supplement and in some cases replace the role of the State in providing basic health services to vulnerable groups. These NGOs collaborate

with State agencies to fulfil their missions and perform their activities (58). In some cases, NGOs are perceived as opponents as they do not take into account the real capabilities of the health sector.

PHC in the Kyrgyz Republic, as in other countries of the region, faces challenges to scale up interventions for coping with the increasing burden of chronic conditions, plus the control, diagnosis and treatment of tuberculosis (as put forward in *Den Sooluk*). Those living in rural and remote areas have limited access to quality PHC or to laboratory and diagnostic services because of the poor facilities and technical equipment and inadequate staff skills (59). Only 13% of PHC physicians are family doctors and 70–80% are of pensionable age or close to retirement. High employee turnover significantly hampers the provision of high-quality health services. PHC infrastructure also lacks modern information technology and systems (46).

The shortage of family doctors/general practitioners is linked to the high workload (unnecessary reporting, information-recording forms and requirements), the extremely low salaries and lack of motivation. Consequently, there is a very high number combining part-time jobs and an insufficient level of knowledge and skills among family doctors. PHC also suffers from inadequate infrastructure and laboratory and diagnostic equipment. The low completion rates for information recording and reporting forms are partly due to inadequate information and communication technology. All these factors have resulted in serious issues of trust in the quality of PHC. Patients tend to turn to family doctors only to receive a referral for a laboratory test and receive prescriptions for reimbursement of the cost of medicines, in general preferring to consult specialists (11,13,33,46).

Notwithstanding the existence of plans aiming to shift care from a centralized system with excessive hospital capacity towards a system based on strong and high-quality PHC that ensures continuity, comprehensiveness, family and community orientation, and more cost-effective use of resources (e.g. Health 2030 (12)), actual implementation of such plans lacks efficiency. There are a number of reasons for this failure: (i) fragmentation and lack of systemic approach to PHC reform where too many activities are project dependent, funded by external donors and implemented only in pilots; (ii) low investment in human resources, which results in low prestige for the work of family doctors and a catastrophic shortage of doctors willing to work in PHC; and (iii) excessive centralization and vertical approach to health system management, with a high level of formal and bureaucrat procedures and a low level of autonomy granted to health facilities (38).

3.3.2 Specialist care

The network of secondary level hospitals includes child care, infectious diseases, resuscitation, surgical and therapeutic departments. Medical equipment, devices and technical support varies among secondary hospitals. While some hospitals do not use expensive equipment because of a lack of trained specialists, others with weak facilities and technical support are not able to provide the population with the necessary services (conclusions from the boards of the Ministry of Health).

Territorial hospitals (at *rayon* level) have been established since 2002, replacing the former central hospitals in the largest town or village of the *rayon*. Traditionally, central *rayon* hospitals played a key role as they were responsible for all health care in the *rayon*, including that provided in smaller health facilities such as rural district hospitals, rural doctor ambulatories and FAPs. They were also in charge of medical statistics. By 2004, the territorial hospitals or affiliations of territorial hospitals (including territorial city hospitals) had been established (11).

City hospitals provide general hospital care in cities, including hospitals specializing in adult care, child care and maternity/gynaecological care. They were created through mergers of health facilities situated in the same city and the closure of inefficient facilities or their transformation into family group practices or FMCs (11).

Oblast merged hospitals provide specialized outpatient and general and specialized hospital care at the *oblast* level. With the exception of the republican facilities, these providers have the largest capacity within an *oblast* and are usually situated in the *oblast* capital. Oblast merged hospitals are the result of a restructuring in 2000 where all *oblast* hospitals were combined into one organizational unit with the aim of achieving cost savings and improving integration and coordination of care. Administrative functions were transferred to *oblast* FMCs. These hospitals have now incorporated general, specialized and paraclinical health facilities, such as dispensaries, tuberculosis treatment, transfusion stations and forensic medicine (11).

The main challenge for secondary hospitals is the lack of adequate management, due to the lack of knowledge and skills of current managers. The country has a long history of top-down central steering of these facilities. While reforms aim at giving autonomy to local management, hospitals still suffer from a lack of management competencies.

The financing method (payment per case) stimulates an unnecessary use of hospitalization when patients could have been treated at the PHC level or were moved unnecessarily from secondary to tertiary care (18).

3.3.3 Tertiary care

Tertiary care is provided by health facilities at national level (including national hospitals, national centres and SRIs), most of which are located in the capital Bishkek. They provide specialized outpatient and general and specialized inpatient care and also act as teaching and research hospitals. They have usually the best facilities and experts in the health sector. Specialized dispensaries and hospitals are also active at the regional level. These facilities are narrowly specialized and cover, among other areas, cardiology, infectious disease treatment, mental health, obstetrics, oncology, orthopaedics, paediatrics, radiology, rehabilitation, traumatology and tuberculosis (Law on Healthcare Organizations of 2004).

A small number of private hospitals provide tertiary care. They have up-to-date facilities and equipment and qualified personnel. They also act as clinical locations for teaching and research. Some of these highly specialized surgical hospitals provide treatment for high-income patients, including foreign citizens (11).

Although attempts have been made to increase the managerial autonomy of tertiary hospitals, they suffer from a lack of management knowledge and skills. As for secondary care, payment per case stimulates use of treatment at a higher level than is needed, which is inevitably more costly (46).

3.4 Human resources in health care

The provision of physicians is 21.9 per 10 000 population, with 55.0 per 10 000 for paramedical staff (nurses, midwives, etc.). Paramedical professions receive basic three-year training (and potential additional formal education). Other general health support staff may only have basic training with no formal degree, and are not included here. Overall, staffing levels for paramedical staff are good, and in rural and remote areas there may be more paramedical staff than qualified doctors (46). In PHC, nurses make up 96.5% of the overall staff. The number of family doctors has declined since 2008 and in 2019 is at 53% of what is needed according to planning estimates. Moreover, in rural areas, 79% of family doctors are at or close to retirement age (59).

Currently, six higher education institutions are engaged in educating medical and pharmaceutical personnel. The duration of basic education in the faculties of dentistry, pharmacy and medical prophylactics is five years, with six years for medical and paediatric faculties (60).

Postgraduate education is provided by higher education institutions (universities), national centres, and SRIs that are licensed by the Ministry of Health to implement clinical residency programmes (two years), postgraduate studies (three years) and doctoral studies (five years). Graduates of higher educational institutions can only do a doctorate after completing clinical residency. In the public sector, having an academic degree increases salary levels (53). One of the requirements for applicants for the scientific degree of candidate of science is passing the enrolment and candidate examinations, the purpose of which is to determine the level of professional knowledge of the applicant and the degree of his/her preparedness for independent research work. Examinations include such disciplines as history and philosophy of science, a foreign language, a special discipline in accordance with the topic of the dissertation and the State language. English is most often chosen as a foreign language (approved by Government Decree of Kyrgyz Republic in 2012 and amended in 2014, 2015 and 2017 (61)).

3.4.1 Challenges in adequate provision of health personnel

There are numerous challenges to improve medical education quality and deal with the shortage of family doctors in the regions. Currently, there is no human resources strategy for health care (62). The excessive number of medical education institutions, including a growing number of students, hampers the quality of training because medical faculties often cannot provide sufficient clinical training and there is no independent accreditation and evaluation of students and institutions (33). The medical education system lacks effective mechanisms to attract and retain staff in the regions; it suffers from inadequate infrastructure and resources, plus inadequate access to mentoring and continuing professional development. There is insufficient access to and use of standards, clinical guidelines and protocols. Medical equipment for physicians in remote regions is outdated, and the country lacks reliable planning instruments for human resources in health (62). The following key issues have been documented.

Regional distribution. One of the critical challenges for human resources in the Kyrgyz Republic is the uneven distribution of staff, with urban areas having better levels than rural ones. The shortage of physicians is sometimes critical in some rural and hard-to-reach areas, where there can be fewer than seven doctors per 10 000 population (11).

Training and resources. There has been a marked decline in the quality of medical education and concerns have been raised about the quality of health services because of this inadequate training and a lack of resources (63). A strategy for developing postgraduate and continuous medical education for 2014–2020 (60) was put in place to improve the quality of training for medical specialists, solve human resources problems and improve the quality of medical care. The regulatory framework for medical education was adapted, improving access to clinical practice and strengthening outpatient medical practice. It is now planned to decentralize postgraduate medical education, create an effective system of continuous medical education and ensure wide involvement of professional associations at all stages of educating medical personnel.

Graduate preferences for certain specialties. Graduates of medical universities prefer to choose specialties such as obstetrics and gynaecology, surgery or cardiology rather than areas such as family medicine or phthisiopulmonology. This leads to an overabundance of students in some programmes and shortages in others (59).

Recruitment quotas. The process of recruiting students for specialties is not properly regulated and does not take into account the actual needs of the health-care system. Currently, there is no formal and regulatory planning method for human resources that establishes criteria and conditions based on the health system's future staffing needs, population health needs and other factors such as demographic trends. Moreover, the growing number of graduates of medical schools does not

solve the shortages of medical staff (especially in rural areas). Not all students finish their studies; some graduates do not go to work in remote areas and a number of graduate students do not work in health care. The universities have no follow-up system to examine whether their trained students work in the health-care sector. Moreover, the Government has no follow-up system to determine how many medically trained people there are who could be working in the health-care system. Admission numbers to medical schools are not properly regulated or planned by the Ministry of Education and Science, although the Ministry of Health is attempting to ensure that young doctors start their working career with at least a period in rural areas (54).

Provision of practical clinical training. Although the number of medical universities and departments is growing, the number of hospitals and health facilities where students can get practical training is not keeping pace, which has a negative impact on the quality of training. Although the reform programmes (*Manas*, *Manas Taalimi* and *Den Sooluk*) aimed to improve both the number of facilities offering training and its quality, the current experience is that young doctors receive insufficient practical training. There are no clear mechanisms of interaction between clinical and educational organizations, and the existing clinical centres are not fully utilized because of insufficient facilities and technical equipment for adequate medical training. In addition, there are significant differences between medical training institutes in the content of their training programmes, with some schools trying to utilize new methods. Content of programmes is highly dependent on the individual responsible for the training. In many medical schools, training programmes are often still grounded in old traditions rather than actual clinical evidence and these schools do not integrate evidence-informed guidelines in their curriculum (59).

Lack of educational facilities. Inadequate provisions in educational organizations (e.g. study rooms and equipment) and lack of access to patients creates the situation where students have difficulty passing clinical practice, which affects the quality of the educational services provided (64).

Regulations for medical education. There are no regulations to guarantee that (new) medical institutions provide adequate training in clinical settings adapted to new medical standards (with sufficient infrastructure, equipment and support for training of students). Some preliminary efforts are made but more is needed to guarantee the quality of training (29).

Summary box. Key opportunities and challenges for a future KTP considering the organization and governance of the health system

OPPORTUNITIES PROVIDED BY A KTP

- ❑ A KTP can bring researchers, policy-makers and managers together to consider issues around the interface of research with policy and practice.
- ❑ A KTP can help the Ministry of Health to set health system policy priorities to be studied and discussed with stakeholders.

CHALLENGES FOR A FUTURE KTP

- ❑ Unclear systems for the Ministry of Health to interlink with other ministries and departments responsible for health-related issues can be a barrier in the development and implementation of priority issues of health protection and prevention.

4. HEALTH INFORMATION SYSTEM

The main objective of this chapter is to describe the national health information system, including aspects of e-health, and the available governance and resources, indicators, data sources, data management and data quality. It also examines how health information is disseminated and used. The Ministry of Health runs a health information system with a number of subsystems related to the different institutions that collect data. These then submit data to the Republican Medical Information Centre, which issues annually statistical yearbooks. In 2017, the Republican Medical Information Centre was changed to the Centre for e-Health under the Ministry of Health (by order of the Ministry of Health of the Kyrgyz Republic of 12 January 2017, No. 23).

4.1 Governance and data sources

Information and communication technologies are being introduced at all levels of the health-care system to enhance monitoring of the system at government level and to assess interventions and decision-making in the health sector. The development and implementation of these systems are considered important for creating transparency towards civil society. Recent examples of communicating with the public are the Health of the Population and Activities of Health Organizations of the Kyrgyz Republic and the Register of Newborns (65).

As part of the health-care reforms, donors have invested significantly in the establishment of a multilevel health information system, technical equipment and software for the Unified Health Information System (MHIF), which will be used for collecting, processing and storing information on the health status of citizens, provision of health care and medicines (66).

In 2014, a new registry, the Republican Medical Information Centre, was introduced (which was developed in 2006 and piloted from 2007). The Centre for e-Health was then established in 2017 under the Ministry of Health. All data to develop basic indicators about health and health system were until recently collected, processed and stored in the Centre for e-Health, which is part of the Ministry of Health. The e-Health Strategy and Action Plan 2015–2020 (e-Health Strategy) envisions a modern computerized health-care system based on coordinated development of central and local systems, and consolidation of the currently fragmented system (67). Major efforts have been made to improve and integrate health information systems and introduce modern e-health technologies. These included an institutional and technological transformation of the Republican Medical Information Centre (including the establishment of a data-processing centre) to ensure a unified approach to the introduction of e-health information systems (66).

National data collected in the Centre for e-Health on morbidity, mortality and health system performance are actively used in the development of public health policies, for example the national programmes for health sector reform, Strategy 2020, the State Programme and Action Plan for the Prevention of Noncommunicable Diseases for 2013–2020, the State Programme for Improving Food Security and Nutrition for 2015–2017, laws in the field of nutrition (covering themes such as salt iodization, flour fortification and marketing of baby food products (68)) and department programmes such as Development of Palliative Care in the Kyrgyz Republic and Improving Quality of Inpatient Care for Children, 2012–2014 (13,69).

4.2 Assessing the current health information system

It should be noted that information and communication technologies for data management at all levels of the health sector are currently insufficiently used (70). Despite efforts to enhance health information systems, problems still occur in infrastructure and the availability of data at health-care facilities at different levels. Although the intent is to have an integrated health information system, there are still several parallel streams of information collection as well as major differences in the validity and reliability of data. Not all data collectors comply with the required standards, and the variation in the quality of technological infrastructure impedes prompt information exchange for decision-making, both for the management of facilities and for policy-making (70).

Despite recent efforts, there is still a dislocation between information needs to support professional, management and policy decisions and the current provision of infrastructure and training, which hampers the use of modern information technologies.

Summary box. Key opportunities and challenges for a future KTP considering the organization and governance of the health information system

OPPORTUNITIES PROVIDED BY A KTP	CHALLENGES FOR A FUTURE KTP
<ul style="list-style-type: none"> ❑ A KTP can capitalize on the extensive database of all health indicators, as well as the large number of disease registers. ❑ A KTP can benefit from the established practice of developing clinical guidelines/protocols, as well as the acceptance of these by the clinical and scientific community. 	<ul style="list-style-type: none"> ❑ Relatively inaccurate data in the health-care system can be an obstacle to the development and implementation of solutions for priority issues.

5. NATIONAL HEALTH RESEARCH

The aim of this chapter is to develop a better understanding of how the national health research system governs and structures health research processes; what capacity (organizational, infrastructure and human resources) is available to conduct high-quality and health system-relevant research; and what funding is available for health research (71). The chapter also reflects on the current health research tradition and dominant practices (biomedical or clinical research, public health research, and health systems research).

This chapter also outlines the actors and relationships involved in the national health research system. In addition, the extent that health research benefits decision-makers and practitioners in health and related fields and society is examined.

5.1 Infrastructure and stewardship of health research

The health research system consists of three main pillars that act independently of each other: (i) the State Department on Science within the Ministry of Education and Science and the Science Council (previously the Medical Science Council) within the Ministry of Health, (ii) the Higher Attestation Commission, and (iii) the institutions and independent research facilities (this is covered in more detail in section 6.1 and Fig. 6.1).

For State-funded research, there is a clear governance structure (Law on Science and the Basics of State Scientific and Technical Policy of 2017 (72)).

The Ministry of Education and Science is the primary implementing agency responsible for the management of earmarked State research funding.

The State Committee on Science is the fund holder and the final decision-maker in grant allocation. This Committee reviews applications and, jointly with the Ministry of Finance, makes decisions on funding of research initiatives (based upon the conclusions/recommendations of an expert panel). Up to 2014, the Medical Science Council of the Ministry of Health acted within the State Committee on Science to coordinate medical research activities. The Scientific Technical Committee at the Ministry of Health was established in August 2019 to continue these activities (Order of the Ministry of Health of the Kyrgyz Republic of 30 August 2019, No. 864).

There are no specific regulations for research financed outside Government budgets. However, the research used to obtain a degree must meet specific rules and regulations set by the Higher Attestation Commission. The key tasks of the Commission are to develop and control the academic frameworks related to attestation and training of scientists and academics, set requirements for dissertations for research degrees, provide forms and regulations for dissertation commissions in scientific domains and control the quality of their activities, set requirements for assigning research degrees and academic titles, review defended dissertations, set the list of acceptable academic periodicals for the publications of doctoral research results, and set the requirements for the accreditation of academic and research institutions that grant doctoral degrees (73).

State budget funding for research is very low, but despite budget problems, efforts are made to allocate funds for scientific research work on an annual basis and with a more programmatic approach (Law on Science and the Basics of State Scientific and Technical Policy of 2017 (72)). In the Kyrgyz Republic, there are three types of research institutions funded by the State budget.

The National Academy of Sciences. The aims of the Academy are to carry out research in different scientific domains, to train scientists in all fields of knowledge, to advise the government in matters of scientific policy and to disseminate scientific knowledge. The Academy has three major departments (sections), one focusing on medical sciences. The Academy includes 25 scientific organizations in different scientific domains (including regional department and scientific centres) and five institutes for scientific and social services. These conduct and coordinate fundamental and applied research and employ scientific workers with higher qualifications. The Academy defines the research topics of the national research institutions, coordinates basic research funded by the State, participates in international organizations and organizes symposia and conferences to discuss scientific issues and coordinate research. However, within the very limited State budgets for research, medical and health system-related research was not a particular priority in the programme 2013–2017 (Resolution on the approval of the Charter of the National Academy of Sciences of 2017 (74)).

Higher education institutions (universities). In practice, higher education institutions are mainly focused on educating, and far less on research (60). Mostly, they lack a research support infrastructure because of insufficient resources. Apart from the Central Research Laboratory at the Kyrgyz State Medical Academy, universities do not have their own clinical research facilities. Medical and health-related research work is carried out by staff and students of universities within national centres and research centres. These centres do not always have the necessary infrastructure and equipment to perform high-level research, with implications for the quality of the research. Universities have public health departments that can perform research on health systems, health services and health promotion, but dedicated research programmes are not developed. If any, this type of research is mostly performed in the framework of dissertations (71).

National centres. The national centres are part of the Ministry of Health and integrated into tertiary health facilities. A national centre will combine clinical activities and (mainly clinical) research focused on a particular health problem or medical specialty (e.g. oncology cardiology, maternal and child health). The national centres conduct applied and fundamental research, develop and participate in the implementation and monitoring of strategic programmes, produce clinical guidelines/protocols, and conduct training and seminars in their field for the whole country. Some of them collaborate with international expertise centres to enhance clinical and research activities (13,69).

Health Policy Analysis Centre (HPAC). One organization is worth particular attention in the context of EIP. In 2009, the HPAC was formally created as a successor of the Health Policy Analysis Project, which was a pioneer in EIP in the Kyrgyz Republic (75). HPAC conducts research/studies in health systems/policy areas. The activities of the project started in 2000 with support of WHO and DFID. HPAC works in collaboration with agencies such as DFID; Gavi, the Vaccine Alliance; the International Finance Corporation; the Open Scholarship Initiative; USAID; WHO; and the World Bank. Its mission is to support evidence-informed decision-making in health care and it carries out health policy research. HPAC involves representatives of the Ministry of Health in the process of setting research priorities and discussing the design of studies, preliminary results and recommendations. Final reports of studies are published taking into account comments received during discussions. Over 60 studies have been conducted on poverty and equity, health financing, public health sector efficiency, health service delivery, human resources and public health (52,76,77,78,79). In addition, the HPAC team developed health system performance indicators for *Manas* and contributed to the revision of the *Manas Taalimi* monitoring indicators (2006–2010). Since 2004, the HPAC team has been involved in training courses on health management and health systems for national and international policy audiences (countries of the Caucasus, Mongolia, the Republic of Moldova, the

Russian Federation and Ukraine). Since 2007, HPAC has organized round-table discussions and seminars on issues such as the quality of treatment and prevention of cardiovascular diseases, the accessibility and efficiency of general practice centres and public–private partnership. These are intended to facilitate the exchange of information, debate and consensus building. At present, the Ministry of Health and development partners are announcing a tender for developing evidence in which HPAC can participate on an equal basis with other research organizations.

In addition, there are still some centres that function as SRIs and perform similar activities to national centres but do not use that designation. (All national centres that were previously called SRIs have not changed the nature of their work with the change of name.) Research in these national centres is carried out by medical staff (with a clinical methodological background), sometimes in collaboration with public health departments. While collaboration with public health departments was institutionalized to include other scientific perspectives, the model was abolished because of a lack of financing (12).

Some private and public organizations (including various professional associations) also carry out research and provide consulting services.

5.1.1 Clinical and biomedical research

Currently, fundamental and applied clinical research is conducted in 20 organizations but on a limited scale largely because, until 2017, the Ministry of Finance would only fund the salaries of scientific personnel. Clinical and experimental studies require modern diagnostic methods that are performed only in commercial laboratories, which are better equipped than public ones (80).

5.1.2 Health systems and health promotion research

Health systems and health promotion research is sometimes performed in these institutions but only on an ad hoc basis. Most of this research has been performed by the HPAC through funded health programmes and with support from international donors (e.g. KfW, UNICEF, USAID, WHO and World Bank). Such research tends to focus on one particular issue (e.g. maternal and child health or nutrition and broader health systems-related research on financing access to health care) (81).

5.1.3 Research and policy-making strategy

The research institutes (section 5.1) develop their own research strategies, approve them (e.g. the Presidium approves projects in the National Academy of Sciences and scientific councils approve projects in higher educational institutions, national centres and SRIs) and eventually submit them to the Ministry of Education and Science. The Expert Council in the Ministry assesses the relevance and feasibility of implementing the submitted projects, approves budgetary financing or rejects those that are considered not relevant. However, in practice, there is no coordination between institutions in setting research priorities and planning implementation. Practically all the submitted research projects are approved. For example, according to research participants in this SA, 29 topics were proposed and approved in 2017, including two identical projects from two independent research organizations (Annex 2).

According to some SA interviewees and members of the SA focus groups, the high autonomy of the research community bears the risk that research is not always aligned with policy and health-care priorities. When limited government financial resources for scientific research are taken into account, questions can be raised on the appropriateness and relevance of many studies (clinical as well as other types).

There has been an increased focus on ethics in research. Ethical committees are in place at the Ministry of Health (representing various stakeholders) and the Kyrgyz State Medical Academy. Stakeholders report some efforts to incorporate courses on bioethics into the medical curriculum (46).

5.1.4 Reforms in the health research system

Reforms have been implemented under the 2012 National Sustainable Development Strategy for 2013–2017 (22), and the 2017 Law on Science and the Foundations of State Scientific and Technical Policy (82). Since 2015, reforms of the health research system aim to eventually develop stronger coordination and integration of research institutes and universities (82).

- The National Academy of Sciences and SRIs will reorganize and reduce their key central roles compared with previous periods.
- Future funding will be provided in three forms: basic financing, targeted programme financing and competitive financing. Expert commissions will be convened to select projects (83).
- The Council for Science, Innovation and New Technologies was established under the Prime Minister of the Kyrgyz Republic.
- A newly established Department of Science of the Ministry of Education and Science has become responsible for the management of a new Science Fund. However, the Ministry of Health can still not influence priority setting in the research agenda of the centres discussed above.
- To improve coordination of public health research activities, promote multidisciplinary cooperation and increase the efficiency of decision-making processes, the Ministry of Health established the Scientific Council on Public Health in 2015 (Order of the Ministry of Health of the Kyrgyz Republic of 7 October 2015, No. 577). However, according to the Chairman of the Scientific Council, it is unclear at this stage whether this initiative will be successful in the realization of its goal.
- The Scientific Technical Committee was established at the Ministry of Health in August 2019 to implement and identify priority areas of scientific and technical policy in the health-care system and to introduce scientific advances, new technologies and advanced production experience into the practice of research.

The Centre for Health System Development and Technology Assessment (CHSD&TA) provides access to electronic library resources, including Cochrane, HINARI, Pubmed and Science Direct databases. Practising physicians/doctors, students and researchers in the regions have access to more than 40 regional medical libraries. The clinical guidelines database facilitates the development of comprehensive strategy on best practice. However, despite the Law of the Kyrgyz Republic on Librarianship of 1998 (84), the material and technical base of the regional libraries is weak and requires significant improvement. In 2016, expert councils in the national centres developed a framework for scientific projects for the Scientific and Technical Council of the Ministry of Education and Science and, as a result, 158 themes were approved for targeted financing in 2017. In 2017, the Ministry of Education and Science announced a competition for funding research projects in seven priority areas, one of which was health and quality of human life. What is new is that the selection process for projects will look at and review methodological aspects and encourage the use of adequate methods for generating evidence. All proposals will be reviewed by scientific experts, but considerable progress is still needed to realize a real qualitative review of the methodologies proposed (85).

The goal of the health and quality of human life priority area was research to improve public health through developing new technologies and methods for diagnosis, treatment and prevention of

common diseases and to improve social services through creating a provision system based on market relations. Areas of research within this priority (86) were:

- improvement of preventive medicine;
- development and implementation in public health of new methods of diagnosis and treatment of common diseases;
- biotechnology, detection of genetic polymorphisms and other determinants of pathological conditions;
- creation and development of a new generation of domestic herbal medicines;
- finance for social services and calculation of budgetary funds;
- assessment of the republican and local budgets necessary for the organization of the provision of social services;
- investment in the development of social services; and
- principles of social support of the population.

In 2017, 29 health-care topics were put forward by the Ministry of Education and Science to be financed (Annex 2). The list illustrates that most of these projects are still very clinically oriented (85), with only six having some relevance to the health system issues.

5.1.5 Monitoring and evaluation

The Ministry of Health plays a central role in the monitoring and evaluation of (reform) policies. The HPAC was established in 2009 as the successor of the Health Policy Analysis Project (75). The need for monitoring and evaluation studies is discussed in the framework of the joint annual reviews of *Den Sooluk*. Permanent working groups have been established to identify priority areas. Members of these working groups are development partners and representatives of professional associations involved in the planning of monitoring and evaluation projects and their follow-up. These working groups can also comment on the methodologies used in the projects. Sometimes external consultants or NGOs (consulting centres) are involved for the methodological support of the projects, mainly for projects with development partners.

5.2 Human and financial resources for health research

According to the report of the National Statistical Committee of the Kyrgyz Republic, 485 million soms (€7.1 million) was spent on research and development in 2013. Despite the fact that this was increased to 568 million soms in 2017, when converted to euros at the corresponding rate, there is little change in the amount (87).

As a rule, the financing of medical science is distributed through the Ministry of Education and Science (whereas the Ministry of Health is responsible only for salaries). In 2017, this financing amounted to 48 million soms (€601 000). Over the past few years, this amount has not changed. It is not known, however, how much money was spent on biomedical research within health system research/public health research (24).

Some research support was provided through international grants, but, as a rule, they are awarded on a competitive basis and a successful application involves a high level of research. Under current conditions, it is extremely difficult to perform at this high level (88).

Part of the reforms to the research system includes a reform of the education and certification of research personnel and, recently, decrees were introduced concerning scientific careers (89):

- increasing requirements to ensure the quality of publications for scientific personnel obtaining doctoral/candidate degrees (teachers and professors);
- using independent external experts in the commissions for assessing scientific relevance and quality of research of dissertations;
- increasing the transparency for doctoral procedures (electronic database and publication of theses); and
- increasing the monthly remuneration for those obtaining a scientific degree.

In many cases, research is performed in the framework of education and obtaining degrees. Sometimes, research is performed by students in the framework of ongoing research projects at research centres. For obtaining the degree of Candidate/Doctor of Medical Sciences, it is necessary to conduct research and publish the results in peer-reviewed scientific journals. The decision on the approval and assigning of academic degrees of the Higher Attestation Commission takes place after a technical examination (check for plagiarism, compliance of the design with the requirements of the Higher Attestation Commission) and a positive assessment by the internal or external expert in the specialty (73).

Another strategy to enhance research quality and capacity is through competition. Annually, the leading universities of the country hold competitions between universities for the best and relevant research from young scientists (students, residents and graduate students). The best works are published in the scientific research and practice journals of the universities, and the authors (usually the first three places) are awarded monetary prizes (90).

At present, about 60 scientific journals are published in the Kyrgyz Republic, including 10 journals in the health sector. The local journals in central Asia usually depend on the authors of the articles for their financing. This constitutes a conflict of interest and can result in poor-quality articles being published (85).

5.3 Assessing the health research system and quality of research

In 2015–2016, an expert assessment of the scientific system was carried out within the European Union's Inconet CA project (91). The report stated that the science sector of the Kyrgyz Republic had experienced 25 years of stagnation and degradation since the country's independence. Important shortcomings were noted: lack of adequate financing (0.1–0.2% of GDP), obsolete equipment, scientists and technical specialists who did not have the capacity to teach students modern methods of diagnosing diseases, ageing of scientific personnel, and absence of publications in international journals with a high impact factor. Moreover, high costs, language barriers, limited availability of grants for international cooperation and weak participation in international networks and consortia limited the visibility abroad of research activities of the country. Last, but not least, scientific organizations and institutions of higher education were not systematically reviewed, either at the level of institutions or at the level of scientific/research personnel. Criteria and standards in the field of science and education that allowed for transparent and reliable procedures for funding institutions or encouraging individual researchers had not been introduced. Personal relationships prevailed and corruption and bribery affected the whole of science and, in particular, the education sector (91).

While the reforms described above aimed to enhance research capacity through doctoral programmes, the country still struggles with a weak evidence base in the health sector. Moreover, the current process of obtaining a doctorate is still more formulaic: at this stage, there are practically no publications in international journals with a high impact factor. However, it must be considered that one equally

important reason for the limited number of publications in international journals with a high impact factor may be financial constraints, as researchers have to pay for publication themselves. According to the Higher Attestation Commission in 2015, out of 98 defended dissertations, only 1.02% were of high scientific quality, 86.4% were average, 9.18% satisfactory and 3.06% were of low quality. According to the Web of Science rating, the Kyrgyz Republic is placed at 142 in the world on the number of scientific publications, 154 on the number of citations and 139 on the average number of citations. Only five Kyrgyz articles in 2015 were highly cited internationally. In 2016, only 34 publications in medicine were from scientists in the Kyrgyz Republic (Scopus: <https://scimagojr.com>); they were quoted 19 times (citing one publication 0.56), and the country’s Hirsch index was 34.

Summary box. Key opportunities and challenges for a future KTP considering the national health research system

OPPORTUNITIES PROVIDED BY A KTP	CHALLENGES FOR A FUTURE KTP
<ul style="list-style-type: none"> ❑ A KTP can support research priority setting aligned with policy needs. 	<ul style="list-style-type: none"> ❑ Low public funding can be a barrier to drafting and implementation evidence-informed solutions to address high-priority health issues.

6. EIP PROCESSES

This chapter provides an overview of current EIP efforts and an understanding of how the health-care system and the health research system interact. The chapter examines the already complex practice of applying evidence in health decision-making or policies, in particular taking account of the views of key stakeholders and the best available evidence. Strengthening evidence-informed policy-making practices will improve the impact of policy decisions and increase the level of public trust. However, since most research is focused on clinical and to some extent public health research, and since health systems research is fragmented, EIP processes are limited.

Since the beginning of reforms in the health sector, the role of evidence-based medicine, health technology assessment and EIP has always been emphasized and enshrined in the relevant documents; however, there is a gap between the declared and the current practice.

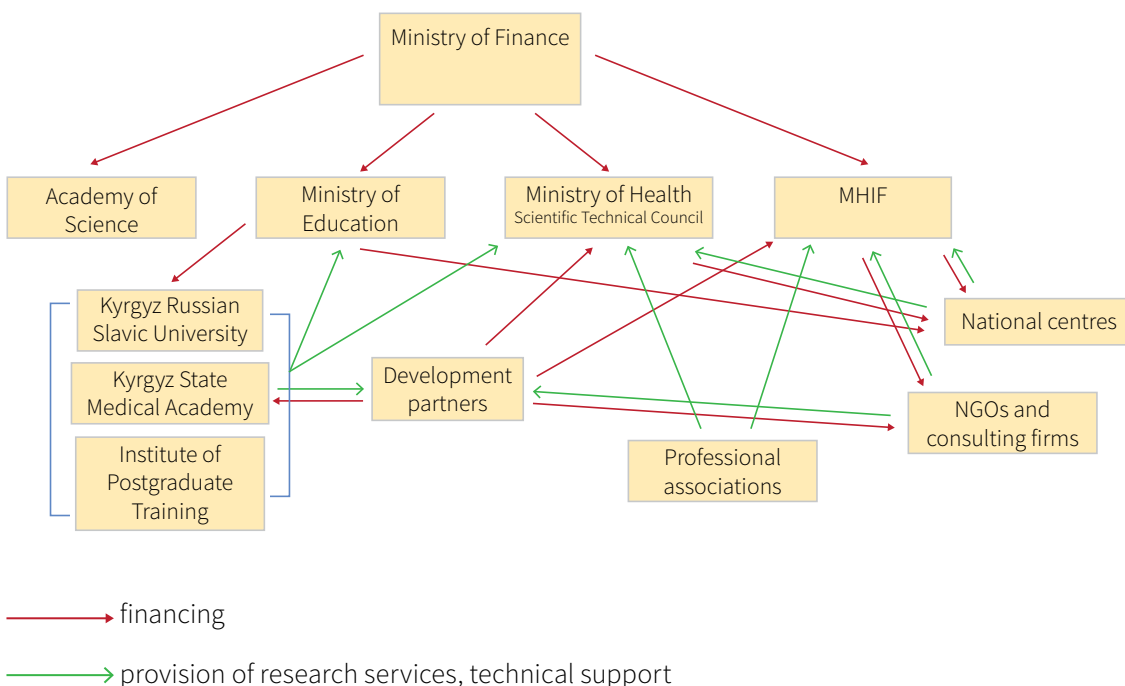
6.1 Major actors

As outlined in previous chapters, actors that have a role in EIP include national organizations that make and support policies and those that carry out research. The main EIP actors in the Kyrgyz Republic include:

- policy actors across various government departments (section 5.1);
- the National Academy of Sciences (section 5.1);
- higher education institutions (universities) and institutions performing both educational and scientific activities (section 3.4);
- national research institutions (section 5.1); and
- private and public organizations (section 3.1.3).

Fig. 6.1 maps the relationship between the parties in the health sector of the Kyrgyz Republic.

Fig. 6.1. Interaction between stakeholders in the health sector



Source: Authors' own compilation

6.2 Current country examples

The Kyrgyz Republic is certainly not yet at the stage where evidence and research findings are systematically used in the development and implementation of health policy-making. The policy-making process is also not informed through participatory processes regularly involving stakeholders and taking their perspectives into account.

6.2.1 Failure by policy-makers to act on evidence

Some recent examples indicate where policy-makers have neglected evidence when making decisions. One such situation is the decision not to finance and implement the Programme for the enrichment (fortification) of household food for children aged 6–24 months with polymicronutrients for the prevention of anaemia. This measure had been supported by a study using a grant from the World Bank and its effectiveness and acceptability had been proved by joint studies by the Ministry of Health, UNICEF and the US Centers for Disease Control and Prevention, plus an external evaluation by the National Statistical Committee of the Kyrgyz Republic. The pilot phase of the programme and the first two years of its expansion/replication to the national level were financed with grants from Kyrgyz–Swiss Health Reform Project, UNICEF and the US Centers for Disease Control and Prevention (92). Despite evidence indicating the program’s success, efforts to implement it into law were initially unsuccessful (93).

6.2.2 Use of research in policy-making for health promotion and disease prevention

There are, however, also a range of promising examples of the use of health information and research in policy-making.

- The National Institute for Strategic Studies undertook research into the prevalence and prevention of tobacco smoking, including among adolescents. The findings of this research led to amendments to the Law of the Kyrgyz Republic regarding increasing taxes on tobacco products (94).
- Several research projects to support the development of a national strategy for the prevention of noncommunicable diseases have been carried out at the National Centre for Cardiology and Therapy, including on the prevalence of metabolic syndrome and the risk factors for obesity, diabetes and cardiovascular diseases (eating patterns, psychosocial/socioeconomic factors, smoking and physical activity). The recommendations of this research were approved by the Government in 2013 and implemented in policy (80).
- The Sun Movement (Scaling-up Nutrition Movement) is an example of close collaboration between politicians, researchers, business representatives and civil society (95). In 2014, as part of the SUN Movement of the Kyrgyz Republic, an Academic Network was established, led by the First Lady of the country. The main goal of the Academic Network is to provide data and evidence at the SUN Movements' request, including from the Parliamentary Network to Support the Drafting of Laws on Nutrition and Food Security. Representatives of the Academic Network worked on the third component – Use of Food to Combat Nutrition-related Diseases –in the State Programme for Improving Food Security and Nutrition for 2015–2017 (approved in 2015).
- Joint research with development partners on food and nutrition has been discussed above and includes work for the national study on the nutritional status of children aged 6–59 months and their mothers (96,97), survey of nutritional status in children 6–24 months of age (92), the Baby-friendly Hospital Initiative (69), the Medico-Demographic Study 2012 (78), and the Multi-indicator Cluster Study 2014 (98). Quarterly assessments on food security at the level of households are carried out by the National Statistics Committee and reported in the Food Security and Poverty Newsletter (99). These assessments are used to support the development of a State programme and served as the basis for amending the Law on Fortification of Bakery Flour (100).
- A draft law on the protection of breastfeeding by regulating the marketing of breast-milk substitutes was grounded in research on how the marketing, advocacy and advertising of breast-milk substitutes were carried out. This study was conducted at the request of the initiative group for the promotion of the draft law, which consisted of specialists from the Ministry of Health, deputies of the *Jogorku Kenesh* and representatives of NGOs and UNICEF (76).

6.2.3 Use of research in policy-making for health service-related initiatives

Several research initiatives have contributed to changes in health services.

- The results of a study on informal out-of-pocket payments by patients, as well as studies on factors affecting the use of generic medicines, were used in the development of the State Medicines Policy for 2014–2020 (77,101).
- A working group of specialists, representatives of professional organizations and patients/their legal representatives was created to develop clinical guidelines/protocols using methodology from the Ministry of Health. A calendar for the development of clinical guidelines/protocols for two years based on clinical needs (prevalent pathology, severe pathology), or at the request of development partners, was approved by the Ministry of Health. Proposed guidelines are discussed at the Expert Council of the Ministry of Health. Those approved are disseminated by email to the CHSD&TA, MHIF, health coordinators in the regions, chief physicians of specialized health centres, research institutes, educational organizations (e.g. Kyrgyz State Medical Academy, Kyrgyz State Medical Institute for Advanced Training) and medical libraries. Printing

of clinical guidelines/protocols and training of personnel in their use has only occurred in pilot hospitals within projects funded by the Swiss Embassy in the Kyrgyz Republic and the World Bank (102).

- Research conducted in the Kyrgyz Russian Slavic University and the Kyrgyz State Medical Academy that assessed knowledge of the basics of evidence-based medicine among students showed that the teaching methods were not sufficiently effective. Higher education institutions are often not included in the distribution of the latest clinical guidelines/protocols and so these are not necessarily taken into account in teaching. The research indicated that the learning process was more theoretical than practical, with material mainly provided by seminars or conferences without taking into account the purpose and the needs of students (103).

6.3 Preparing policies and policy monitoring initiatives

Since 2006, a sector-wide approach (SWAp) bringing together government, donors and other stakeholders has been implemented through which development partners operating in the country provide additional funding to the State budget for developing and implementing the National Health Programmes. *Den Sooluk* supported the development of monitoring and evaluation indicators (the Decree of the Government of the Kyrgyz Republic of 11 June 2017, No. 267). To implement the routine use of research data and evidence for policy and in discussion with development agencies, the Ministry of Health in 2016 initiated the integration of the Sustainable Development Goals in the strategic programmes of the health-care sector and the Development Strategy 2040 (33). Currently, SWAp-2 joint financiers are KfW, the Swiss Embassy in the Kyrgyz Republic and the World Bank. These organizations, in collaboration with other development partners, are responsible for implementation, under the guidance of the Ministry of Health. Joint processes and tools for monitoring progress in implementation have been established and are evaluated during the joint annual reviews of the sector, where an in-depth evaluation of achievements and shortcomings is carried out and feeds into the planning of future activities (104,105).

The Methodology for Strategic Planning of Sustainable Development produced in 2015 by the Ministry of Economy provides support for developing strategic documents. All sectoral programmes, including in the health sector, are assessed by the Ministry of Economy for compliance with the requirements of this methodology (62). First and foremost, it is necessary to analyse and assess current development trends and identify problems. Based on the analysis of the available evidence, further development priorities are then determined and specific policy measures are proposed. This approach is systematically being applied, as was the case, for instance, with regard to the development of the Programme for the Transition to Sustainable Development until 2017 (106).

6.4 The interaction between health policy-makers and the research community

Despite examples above where evidence has been used in policy and health services, overall there are no specific mechanisms or frameworks in the Kyrgyz Republic to ensure that policy-makers are regularly informed of advances in medical and health service research. Furthermore, there is no real culture among policy-makers to be aware of healthcare research and see its relevance and importance. Evidence-informed practice and policy-making have not yet become the norm in most health facilities. Financial incentives and penalties through the MHIF plus staff training in following clinical protocols have proved ineffective (28). After the two initial reform programmes and in preparation of the third reform programme, an assessment was made about implementing evidence in health-care practice. *Den Sooluk* (46) stated (lesson 6):

It is very difficult to change clinical practice and ensure the conditions under which the evidence-based practice becomes the standard at all levels of care in both the public and the private sector. There are significant deviations of the care provided from evidence-based practice despite the new financial incentives at the level of service providers, significant investments in the development and implementation of clinical guidelines focused on evidence-based medicine, as well as training of medical personnel. It is due to the absence of mechanisms to improve the quality of health services, lack of autonomy of health care organizations and weak mechanisms of their accountability as well as outdated methods of medical education. These questions will be the determinants in implementing the four priorities of *Den Sooluk*.

Whether and how policy-makers, health managers and health professionals keep up to date with recent advances in health services and medicine depends on their own initiative. Policy-makers who wish to stay informed, do participate in professional meetings (seminars, conferences) and self-learning does happen. Some policy-makers (mainly from parliament) also approach researchers or experts working at the Ministry of Health to obtain specific information, often urgently needed. Responses to these ad hoc requests may be provided; however, generally this happens without any clear mandate or financial compensation for the work delivered, even if substantial time needs to be invested on behalf of the expert to undertake, sometime comprehensive, analytical work.

The CHSD&TA supports scientific research through providing library access to various academic databases. However, an important institutional constraint hampering the dissemination of evidence has been the closing of the Evidence-based Medicine Department of the CHSD&TA during a reorganization of the Health Development Centre under *Den Sooluk (107)*. Prior to its closure, the Department facilitated communication between departments and drafted educational programmes for evidence-based medicine, which could have laid the foundation for future knowledge translation infrastructure.

The CHSD&TA maintains registries of local research and provides access to international research through medical journals (*108*). The main medical research library reports yearly to the Ministry of Health as an intermediate to make available current research for policy-makers, but this occurs in the form of inventories and does not necessarily focus on ongoing policy questions. The library also provides scientific information to the Ministry of Education and Science in the framework of the Law on Science and the Basics of State Scientific and Technical Policy.

While rapidly increasing Internet access makes international research outcomes more and more accessible, language and search skills remain major barriers for policy-makers, the public and health professionals.

7. MAKING SENSE OF THE CURRENT EIP SITUATION

This chapter builds on these previous chapters to identify key opportunities and challenges to strengthening EIP. At this stage, an infrastructure or platform is being created in the country to narrow the gulf between policy and research in a systematic, sustainable manner.

An Order of the Ministry of Health of the Kyrgyz Republic has been created to provide the basis for the institutional development of EIP, but at present there is a lack of capacity to effectively and systematically present evidence at policy level.

Table 7.1 presents SWOT analysis (strengths, weaknesses, opportunities and threats) for establishing a KTP in the Kyrgyz Republic.

Table 7.1. SWOT analysis of establishing a KTP in the Kyrgyz Republic

STRENGTHS	WEAKNESSES
<p>Consecutive health reform programmes to transform/change the health-care system stress the importance of health information and research, including reforms in the educational system, to enhance the quality of research (and clinical practice) (section 3.1.2)</p> <p>Some research capacity (by individuals) demonstrating a will to enhance research methods and to connect with the international research community (section 1.3)</p> <p>A culture and actual practice of enhancing citizen involvement on (local) health priorities and implementation issues; an active role of NGOs in this process (sections 2.4 and 2.5)</p> <p>The (political) will to seek ways to improve governance, to change policy-making and policy implementation processes; despite the Kyrgyz Republic being a pioneer for EIP among countries of the former USSR (section 5.1)</p> <p>Efforts to introduce clinical guidelines in the system (e.g. development of national and adaptation of international guidelines) (sections 3.1, 5.1 and 6.4)</p>	<p>An ageing scientific workforce (section 5.3)</p> <p>Absence of research publications in high-quality journals (section 5.3)</p> <p>Insufficient staff numbers in remote rural areas trained to do or understand research (sections 3.3.1 and 3.4)</p> <p>Insufficient methodological knowledge and skills to generate high-quality evidence (section 5.3)</p> <p>Very low financial resources for health and health systems research; EIP is mainly driven by donors (sections 3.3.1 and 6.3)</p> <p>Many current managers of research institutes do not pay attention to new research standards and are not interested in evidence (section 5.1.3)</p> <p>Focus on health information data collection but too little on data analysis; problems with the quality (validity reliability) of the data collected (section 4.2)</p> <p>Inadequate research infrastructures for clinical research (section 5.1)</p> <p>Little health system-related research; only happening on an ad hoc basis (section 5.1.2)</p> <p>Part of the research community is not yet working according to international requirements; there is too little overall international networking (section 5.2)</p> <p>Lack of knowledge and capacity of teaching staff in universities and national research centres in methods of evidence development and evidence synthesis techniques (section 6.2.3)</p> <p>Lack of efforts to enhance the use of clinical guidelines in practice and abolishment of a dedicated unit developing clinical guidelines operating under Health Development Centre (section 6.4)</p> <p>Lack of mechanisms to systematize interactions between policy-makers and researchers (section 6.4)</p>

OPPORTUNITIES	THREATS
<p>Open attitude towards evidence; recognition of the importance of evidence in policy development, such as the <i>Manas</i>, <i>Manas Taalimi</i> and <i>Den Sooluk</i> programmes (section 3.1.2)</p>	<p>Frequent changes of government and limited financial resources plus lack of political stability (and political staff turnover) hamper sustainable policies (research and health system development) (sections 2.2 and 2.4)</p>
<p>Health-care development programme (Health 2030) will involve local authorities in decision-making grounded in monitoring and local population needs assessment (section 3.1.2)</p>	<p>Strong focus on clinical research and the relevance of evidence underestimated for health system, public health and service development (sections 1.2, 5.1.1 and 5.1.4)</p>
<p>Development of a health information system and a monitoring and evaluation system since the beginning of health reform programmes (sections 1.2, 5.1.5 and 6.3)</p>	<p>Migration of highly qualified people (section 2.2)</p> <p>Low salaries for researchers lead to loss of expertise and capacity in the country (section 3.3.1)</p>
<p>Individual researchers trying to enhance methodological sound research practice (section 1.2)</p>	<p>Insufficient commitment of universities and higher education institutions to training the coming generation of students in evidence development and synthesis methods (sections 3.4.1 and 6.4)</p>
<p>Development partners who provide financial and technical support (sections 2.3 and 3.1.2)</p>	<p>Lack of a programmatic approach to develop health system-related research; no research policy in place to support types of research other than clinical research (sections 5.1.1 and 5.1.4)</p>
<p>Law is in place to orient the financing of research towards identified health priorities (section 3.1.2)</p>	<p>Insufficient development of regional libraries to provide access to literature databases, hampering the use and uptake of evidence (section 5.1.3)</p>
<p>Programme on e-health development and an e-health centre responsible for implementation (section 4.1)</p>	<p>Insufficient collaboration between Ministry of Education and Science and Ministry of Health to identify and set research priorities (section 5.1.4)</p>
<p>Recent stronger Government focus on monitoring the functioning of health facilities and implementation of health programmes: establishment of the HPAC within the Ministry of Health (section 5.1)</p>	<p>Development partners are the only ones driving the enhancement of evidence-informed practices (section 6.3)</p>
<p>Some individual members of the staff of national centres, SRIs and universities have experience and skills in methods to develop evidence-informed recommendations for the health sector (section 5.1)</p>	<p>Lack of interaction between the research community, the Ministry of Health and the policy-making field in setting health research and policy priorities (section 6.4)</p>
<p>The will to strengthen the research capacity in the country (section 5.3)</p>	
<p>Professional organizations conduct training and attestation of medical workers, participate in the development and dissemination of clinical guidelines and clinical protocols (sections 6.1 and 6.2.3)</p>	

8. EIP INSTITUTIONALIZING CONSIDERATIONS IN THE KYRGYZ REPUBLIC

This chapter describes the considerations for institutionalizing EIP in the Kyrgyz Republic and outlines some of the features of an institutionalized EIP process in the country.

At the SA launch seminar in September 2015, the key players in the EIP field were identified (Chapter 5). It was stressed that stakeholders representing civil society and professional associations should have a clear role in the functioning of the KTP. The main users of the KTP would be the MHIF, the Ministry of Health and civil society in the Kyrgyz Republic. All stakeholders acknowledged that the KTP should be neutral, reliable and trustworthy. Having organizational and financial sustainability in a country with limited resources is extremely important.

At the time of establishment, the KTP would need to adopt an organizational model for knowledge brokering. This can be grounded in the criteria outlined in the BRIDGE (Brokering Knowledge and Research Information to Support the Development and Governance of Health Systems in Europe) study (e.g. analysis against a benchmark such as prior year to help in understanding results) (109). These criteria outline in practical terms how neutral knowledge brokering can be established and institutionalized in the Kyrgyz Republic.

During the launch event and follow-up meetings, options to establish a KTP were discussed, guided by the SA Manual:

- a virtual network;
- a unit in the Ministry of Health;
- a group of experts under the Ministry of Health;
- a group of experts involved in health research; or
- a separate new organization either public or private.

For each of these options, an assessment was made as to its suitability for the Kyrgyz Republic. Table 8.1 summarizes the considerations of the stakeholders.

Table 8.1. Options for KTP institutionalization in the Kyrgyz Republic

STRUCTURE	ADVANTAGES	DISADVANTAGES
KTP as a virtual network	<p>No need to organize premises and incur related costs</p> <p>Number of experts engaged not limited by available space</p> <p>Reduced risk of institutional bias, allowing KTP to be more independent</p>	<p>Absence of a physical premises may negatively impact the perception of the professionalism of the KTP</p> <p>Lack of sufficient informational technology skills and infrastructure to conduct discussions may restrict engagement of experts in KTP</p> <p>Lack of solid responsibility and accountability mechanisms may threaten ongoing commitment and sustainability</p> <p>Experts may not be always involved in the activities of KTP because of other commitments</p> <p>Interface and communication with the Ministry of Health may not be sustainable</p>
KTP as a unit in the Ministry of Health	<p>More opportunities for interface with the Ministry through the newly established Scientific Technical Committee</p> <p>Close link with the management of the Ministry will facilitate a more rapid response to parliamentary or governmental requests for evidence</p> <p>Institutionalization of the KTP would bring the benefits of a structural unit in the Ministry of Health, including staffing, budgets and administrative support</p>	<p>KTP may be pressured to align with the interests of the Ministry and hence lose its impartiality and neutrality</p> <p>Management of the Ministry may impose other routine responsibilities on the KTP, preventing the execution of key functions</p> <p>Low salary of a government worker is low motivation for engaging qualified experts</p> <p>Increase in staff size at the Ministry of Health will require approval from the Ministry of Finance, which could hamper the establishment of the KTP</p>

STRUCTURE	ADVANTAGES	DISADVANTAGES
KTP as an independent network of experts, housed within the Ministry of Health	<p>Utilization of the Ministry as a platform for the interaction between all stakeholders would reduce costs for staff and premises</p> <p>High level of political support from the Ministry</p> <p>Better awareness of the Ministry's needs in evidence for policy-making</p> <p>Institutionalization facilitates contractual arrangements between experts and the Ministry of Health</p>	Possibility of political influence from the Ministry of Health, which could limit autonomy
KTP as a group of experts doing research in universities or scientific institute	<p>High level of independence and neutrality</p> <p>No costs for additional staff and premises</p> <p>Increased independence to raise external funds</p>	<p>Difficulties with KTP sustainability</p> <p>Experts may not be always involved in the activities of KTP because of other commitments</p> <p>Interface and communication with the Ministry of Health may not be sustainable</p> <p>KTP may be perceived as a research group rather than a knowledge broker</p>
KTP as a new institution: independent body	<p>High level of independence and neutrality</p> <p>Increased independence to raise external funds</p>	<p>Interface and communication with the Ministry of Health may need to be established and may not be sustainable</p> <p>May be financially unsustainable due to underfinancing</p>
KTP as a new institution: government agency	<p>May have sustainable financing from the government budget</p> <p>Clear mandates and structures of accountability</p>	<p>Potentially limited independence and neutrality</p> <p>More bureaucracy involved in setting up a KTP; low salary of a government worker is low motivation for qualified experts to become involved</p>

KTP form. Based on the analysis of the different options for the establishment of a KTP, follow-up discussions were organized with the representatives of the Ministry of Health, research institutes, national centres and higher education institutions, as well as the WHO Country Office. Key stakeholders agreed that the best option to establish a KTP would be in the form of a network, coordinated by the CHSD&TA operating closely with the Ministry of Health. As indicated in Health 2030 (12), the CHSD&TA will be transformed into an analytical think tank for the Ministry of Health. The Ministry of Health, SRIs, professional associations and NGOs will participate in the network. In organizational terms, the CHSD&TA will provide the coordinating secretariat

with dedicated and qualified staff to engage in evidence synthesis and knowledge transfer. This secretariat will need to be supported by a network of scientists and institutes providing scientific expertise in a number of medical and health-care domains.

KTP composition. Using the CHSD&TA as the coordinating secretariat has a number of advantages for a KTP where the participants would be representatives of the Ministry of Health, SRIs (including the proposed Scientific Research Public Health Institute), higher educational institutions, professional associations and NGOs.

KTP secretariat. The CHSD&TA has extensive experience in many of the fields relevant to the establishment of a KTP:

- development and adaptation of international guidelines of treatment to improve the quality of medical services provided (the content of medical practice) *(109)*;
- organization and conduct of courses on additional education and training of managers and financial workers in health organizations on management issues and financial management (stewardship) *(110)*;
- implementation of policy for information technology through the formation of the Unified Health Information System (stewardship);
- the formation of a system of medical library activities in the Republic, providing access and outreach to policy-makers on health research matters and the coordination of interlibrary associations and medical information funds (further institutionalization of the health sector); and
- research on the orders of the Ministry of Health on monitoring, evaluating and analysing ongoing reforms in the health-care system (improving the mechanisms for information collection and monitoring, and for supporting prompt and adequate decision-making) *(111,112)*.

In organizational terms, the CHSD&TA can provide the coordinating secretariat and will need dedicated and qualified staff to engage in evidence synthesis and knowledge transfer. The secretariat will also need to be supported in a networked approach by a group providing the necessary scientific expertise in a number of medical and health-care domains. It was assumed that in this way the KTP will become a real interface between policy-makers and the research community and will have direct access to international evidence sources. Furthermore, the structural involvement of experts who are not employees of the Ministry of Health, including professional associations and NGOs, will contribute to the neutrality and autonomy of the KTP.

The CHSD&TA has close contacts with representatives of national research institutes, research centres, medical educational institutions, professional associations, independent experts and researchers since they are all users of its services and technical capabilities. A close relationship with the Ministry of Health can be maintained, which will be the key user of the KTP products, and yet the KTP can still have autonomy by being part of a separate organization. The CHSD&TA already has electronic library and electronic collection of documents and access to various international scientific research databases. A Department of Science and Development is available that can submit evidence to specialists in practical health care, SRIs, national centres and higher education institutes for the development of evidence-informed recommendations.

The choice for the CHSD&TA was certainly also influenced by the fact that it had been put forward by the Ministry of Health to engage in EVIPNet activities (as expressed in the Order of the Ministry of Health No. 657 in 2016 *(113)*). As part of the EVIPNet Europe initiative, a few members of the CHSD&TA have been trained in EVIPNet Europe workshops and a working group had already been established consisting of the staff of the CHSD&TA and experts from the national centres, SRIs and universities.

9. NEXT STEPS

The establishment of a KTP as promoted by EVIPNet Europe is welcomed by all stakeholders involved into this SA and is considered as an important way to strengthen knowledge translation capacity in support of EIP. Moreover, it is seen as an important institutionalized model to enhance dialogue with all stakeholders and integrate available evidence in problem scoping, proposing alternative policy options and implementation of health reforms. Effective communication and collaboration between stakeholders requires a coordinating body (scientific group/secretariat/executive body). The stakeholders involved in the interviews and focus groups of the SA endorsed that an institutionalized KTP would be needed to improve and support the health policy-making process. Opportunities to establish a KTP are perceived to be enhanced through both political momentum and the broad-based support of national and international partners in the Kyrgyz Republic. However, the country will require the assistance of the WHO Regional Office for Europe, specifically through the EVIPNet initiative to provide support for capacity-building and opportunities to share experiences with other countries. Furthermore, EVIPNet Europe can support efforts to promote the formal establishment of the KTP among policy-makers.

A range of key actions was identified in order to establish an effective KTP in the Kyrgyz Republic:

- awareness raising among high-level policy-makers of (i) the added value of EIP to promote the Kyrgyz health system and improve health outcomes, (ii) the need to strengthen national commitment to EIP, (iii) the need to include knowledge translation in university curricula to train future generations, and (iv) the need for adequate financial resources for the KTP;
- capacity-building of researchers in knowledge translation methodology to strengthen effective EIP, and of policy-makers to increase their health literacy and understanding of the role of research evidence in improving health systems and outcomes;
- further developing the organizational model of the KTP to clarify both the goals of the KTP platform and the resources that will be available in the future, taking into account national conditions and resources;
- supporting the building of partnerships between researchers, NGOs, scientific platforms and policy-makers to develop a strategic vision and make the most efficient use of available resources; and
- strengthening of the national health research system, which consists of several interconnected elements, including:
 - investing in the facilities of SRIs and universities to develop capacity in applied and operational research on urgent public health and health system issues;
 - creating a system of regular accreditation for research, scientific and teaching staff;
 - introducing a transparent system for financing scientific research projects from the state budget and advocating for raising the level of public funding for both science in general and research activities in particular; and
 - strengthening international cooperation and applications for grants in the area of health research.

Should these actions be taken, health policy-making in the Kyrgyz Republic can be systematically informed by the best available evidence, supported by a sustainable multisectoral system. The

implementation of evidence-informed policies will improve the health of Kyrgyz people and accelerate the achievement of the Sustainable Development Goals.

While this aspiration can be met through the implementation of the above-outlined actions, and there exists widespread support from stakeholders to do so, it may still require patience and persuasion. Therefore, the momentum in undertaking activities related to EVIPNet and EIP needs to be maintained and steps taken to proceed towards institutionalisation of EIP. Such activities may include the development of evidence briefs for policy and active engagement with international partners and peers through platforms such as EVIPNet Europe's multicountry meetings. This will further demonstrate the added value of EVIPNet to policy-makers and encourage their support in enacting the above recommendations.

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ANNEX 1. LESSONS LEARNED FROM THE METHODOLOGICAL PROCESS

It is important to reflect on some of the lessons that can be learned from undertaking this research.

First, the country team went through a learning curve with regard to the precise expectations of EVIPNet Europe for conducting an SA. It was a new exercise for all parties and involved mutual learning, in particular regarding adapting the SA Manual (which initially was available as a draft) to the local context. Efforts were needed to balance the precise expectations of the SA guidelines and practical and feasible ways to collect and analyse information within the available resources.

Secondly, the actual collection of data was initially performed by one assigned person on the country team. This expert had attended the EVIPNet Europe multicountry meeting in 2015 and so was familiar with the SA Manual and had also received coaching and support through teleconferences with the WHO Secretariat of EVIPNet Europe. The other country team members primarily supported and validated the information. The initial version of the SA report was mainly a technical description of the formal and legal documents but did not include a critical appraisal of the current situation. Additional guidance and support were required to develop this aspect. Eventually, the country team engaged in a critical appraisal plus a search for additional sources of information to substantiate the report.

Thirdly, continuity was difficult to maintain in that the person initially responsible for collecting data and writing the SA withdrew from the country team, and the experts working on the SA were not always available. Furthermore, the individual assigned to the analysis and synthesis of these interviews left without sharing the results of the data collection or analysis with the remaining members of the country team. Despite numerous attempts, it was not possible to recover these data and so they had to be excluded from the development of this SA. In the future, it is important to build in safeguards to prevent such a loss of data from occurring.

Fourthly, the requirement for translations had particular impact on the methodology. The inability to communicate directly and the necessity of always using a translator as an intermediary made the work more challenging in view of timelines and the required resources. The initial report was written in Russian and then was translated for sharing with non-Russian speakers. Reviews and amendments in English then had to be translated into Russian. It was challenging for the translators in finding the right terminology, and sometimes meanings could be missed in translation back and forth from English and Russian. The translation issues clearly showed that we need equivalent and validated concepts in more than one language (in this case in English and Russian) that are sufficiently guided and explained in order to ensure a common understanding. The process of translating demonstrated vividly the impact of the intrinsic characteristics of language and the ways of phrasing arguments, and on the use of scientific concepts and wording (which are often available in English but lack precise counterparts in another language). Considering that the mandate of EVIPNet Europe is to enhance capacity across the 53 Member States, the need for translation (often moving back and forth between two languages, as in this SA) is potentially a source of confusion particularly for an in-depth understanding. For this SA, considerable effort was needed to find terminology that was sufficiently context-sensitive to ensure an accurate description of both the country situation and the ambitions for the SA.

The final face-to-face workshop in May 2018 included intense discussions among the country team facilitated by the chair of the EVIPNet Europe steering group (assisted by a translator) and provided an excellent opportunity to clarify and be more precise on the concrete meaning of what was written

in draft SA reports and to connect it with key concepts that are used within the EVIPNet framework. From a methodological point of view, this interactive translational validation has been a key process and is a good example for the EVIPNet Europe team for future activities. Consequently, the piloting of an SA in the Kyrgyz Republic, a Russian-speaking country, has been a valuable learning process.

ANNEX 2. LIST OF SCIENTIFIC PROJECTS IN HEALTH PROPOSED FOR FUNDING IN 2017

- To develop and implement surgical methods of treatment of injuries and diseases of the musculoskeletal system
- Modern aspects of managing elderly and senile patients with a comorbid condition in the Kyrgyz Republic
- Clinico-morphological evaluation of the course and response to therapy of glomerulopathies in the conditions of the Kyrgyz Republic
- Morphofunctional tissue reactions of modified antitumor therapy
- Monitoring of antibiotic resistance of topical pathogens of bacterial infections in the Kyrgyz Republic
- Medico-social rehabilitation of persons living in the zone of uranium tailings of the Kyrgyz Republic
- Nutrition and indicators of nutritional status (physical development and health status) of children and adolescents in the northern, southern and high mountainous regions of the Kyrgyz Republic at the present stage
- Determination of clinical and epidemiological features of viral hepatitis B, C and the presence of post-vaccinal immunity against hepatitis B in children with cancer in Kyrgyzstan
- Etiological, pathogenetic and clinical features of the course of chronic obstructive pulmonary disease among residents of the KR living in ecologically unfavorable regions
- Assessment and improvement of medical rehabilitation services in the context of a specialized hospital in the Kyrgyz Republic
- Innovation in reproductive health in KR
- Monitoring the quality of the organization and conducting routine preventive vaccinations in the Kyrgyz Republic
- Creation and application in practice of innovative devices of a new design for the treatment of fractures of limbs with mass injuries in the system of civil protection of the population in extreme situations
- The search for molecular-genetic markers of predisposition to metabolic syndrome, oncological and pulmonary diseases in the Kyrgyz population
- Modernization of cardiosurgical care and posttransplantation immunosuppression in the Kyrgyz Republic
- Creation of test systems for serological diagnosis of hepatitis and testing of their diagnostic effectiveness on clinical material from endemic and non-endemic regions
- Assessment of mercury in the human body and reducing the risk of its impact on health
- Investigation of the possibility of using different methods of restoration of the main blood flow in the region of injuries and thrombosis to reduce the level of mortality of early disability of the able-bodied population
- Clinical and morphological assessment of the course and response to therapy of glomerulopathies in the conditions of the Kyrgyz Republic

- The study of the features of clinical and functional manifestations of coronary heart disease and arterial hypertension and their complications with the purpose of developing and implementing effective methods for their treatment and prevention
- Register of patients with systemic lupus erythematosus, Eurasian cohort
- Study of the clinical and physiological and molecular genetic basis of adaptation for human habitation in the highlands, the development of high mountain diseases and certain diseases of the cardiorespiratory system
- Modernization of medical tactics in patients with malignant neoplasms in the Kyrgyz Republic
- Medical and social aspects of reducing infant and child mortality and disability in various pathologies in children in the Kyrgyz Republic
- Congenital and acquired surgical pathology in children in the Kyrgyz Republic: structure, tactics of treatment and prevention
- Improving the quality of perinatal care for women of reproductive age in the Kyrgyz Republic
- Counteracting tuberculosis in the current intense epidemiological situation in the Kyrgyz Republic
- Optimization of diagnosis and treatment of surgical diseases of the abdominal cavity and chest
- Optimization of methods of detection and observation of children with congenital heart diseases in the southern region of the Kyrgyz Republic

THE WHO REGIONAL OFFICE FOR EUROPE

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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