

Technical Assessment

Kyrgyz Republic

**Primary Health Care Quality
Improvement Program
(P167598)**

The World Bank



ABBREVIATIONS AND ACRONYMS

ADP	Additional Drug Package
BSC	Balance Score Card
CAC	Central Asian and Caucasus
CPD	Continuous Professional Development
CVD	Cardiovascular Disease
GDP	Gross Domestic Product
KfW	German Development Bank
KR	Kyrgyz Republic
MDG	Millennium Development Goal
MHI	Mandatory Health Insurance
MHIF	Mandatory Health Insurance Fund
MOH	Ministry of Health
MTBF	Medium-Term Budget Framework
MTEF	Medium-Term Expenditure Framework
NCD	Non-Communicable Disease
OOP	Out-of-Pocket
PBB	Program-Based Budgeting
PHC	Primary Health Care
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goals
SGBP	State Guaranteed Benefit Package
SWAp	Sector-Wide Approach
WBG	World Bank Group
WDI	World Development Indicators
WHO	World Health Organization

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A. Country Context

1. **The Kyrgyz Republic is one of the poorest countries in the Europe and Central Asia region, with a GNP per capita of 1,100 USD in 2016.** Its population of 6.1 million (in 2016) is growing rapidly, at 2.1% per year.¹ Kyrgyz economy and society are considered the most open in Central Asia, but the country has witnessed political and social instability during the last decade. While a new constitution was approved by referendum to shift from presidential to a parliamentary system, frequent changes in government and rapid turnover of senior officials have slowed progress. Economic growth was averaged at a modest 4.4% per year over the period of 2008-2017. Although significant progress was made in poverty reduction, it is estimated that one in four Kyrgyz citizens lived below the national poverty line in 2017.² Going forward, the Kyrgyz government projected average GDP growth of 3.8% per year for the period of 2018-2021. However, growth projections assume continuing efforts to maintain macroeconomic stability, to address institutional weaknesses, and to improve infrastructure. Failure to do so would reduce growth prospects and result in added fiscal pressure.

2. **Like in many post-soviet countries, the Kyrgyz population enjoys almost universal access to basic education and health.** Some 97% of children under age 17 attend school, and only around 2% of the population in 2015 was reported not having access to health services. However, equal access to services is likely undermined by significant variation in the quality of these services across geographical and social divisions in the population. For instance, the under-5 mortality rate is more than 50% higher among the bottom 40 than among the top 60 percent of the population, at 37.4 and 24.0 deaths per 1,000 live births respectively.³ Likewise, learning outcomes in education vary widely across residence, social categories, and types of institutions. Children in poor families—regardless of gender—have lower educational attainment compared with the nonpoor, indicating the presence of a vicious cycle of poverty.

3. **Although the Kyrgyz Republic has made some progress towards the twin goals of the World Bank Group to eliminate extreme poverty and promote shared prosperity, vulnerability remains widespread with a large majority of the population being clustered near the poverty line.** The population, therefore, face high risks of falling back into poverty given the high exposure to shocks and insufficient safety nets. Moreover, economic growth relies on remittances and heavy exploitation of the country's natural resources, which do not translate into labor force growth. In fact, jobs have not been created in the formal sector, and most of the employment that took place in the informal sector, estimated to be around 50% of GDP, is unproductive and undynamic.

4. **A recovery is underway as outlined in the government National Development Strategy 2040.** The Government has made the commitment to improve the access to and quality of social services (especially health and education) while addressing the regional disparities and inequities among the different income and cultural segments of the society. The Strategy 2040 sets forth three main goals, namely: (i) economic well-being of the people; (ii) social welfare; and (iii) security and favorable environment for the lives of citizens.

¹ World Development Indicators (WDI) (2016)

² National Statistics Committee

³ National Statistical Committee of the Kyrgyz Republic (NSC), Ministry of Health [Kyrgyz Republic], and ICF International. 2013. *Kyrgyz Republic Demographic and Health Survey 2012*. Bishkek, Kyrgyz Republic, and Calverton, Maryland, USA: NSC, MOH, and ICF International.

5. **To complement the National Development Strategy, the government has put in place an action plan for the coming 3 years to guide the efforts of stakeholders.** The action plan has identified several areas of priorities, among which is the human development area where education, health, and social protection are cornerstones. Under the healthcare dimension, the government is planning to promote several health awareness campaigns, improve the quality of health services, improve the financing system of the health sector, and build the capacity of health personnel.

6. **In summary, the country is faced with significant challenges that could affect the realization of its priority given to the social sectors.** The challenges are associated with the struggle of the young democracy to build strong and stable public institutions as a foundation for economic and social development. This is in the background of a low revenue base due to the slow economic development and small-sized formal sector. These constraints affect policies and fiscal space for the social sectors, despite the government’s commitment to human development as a key priority. Going forward, the country needs a new development model to tackle the sources of low overall productivity. At the same time, maximizing the efficiency of public policies and the quality of social services have been identified as important steps to help achieve the government goals as set forth in the National Development Strategy 2040.

B. Sectoral and Institutional Context

7. **Health has traditionally been a priority in the Kyrgyz Republic and the country has achieved better health outcomes compared to other countries with similar income level.** Kyrgyz population enjoys a longer life expectancy, from 66.5 years in 1996 to 71.0 years in 2016, due partly to the significant progress in reducing under-5 mortality from 65.8 deaths per 1,000 live births in 1990 to 21.1 in 2016. Improvements in undernourishment have been dramatic over the past decade, and the prevalence of tuberculosis was halved between 2000 and 2012. In 2015, the country was declared as having achieved the Millennium Development Goal (MDG) No. 4 on reducing mortality among children under five.

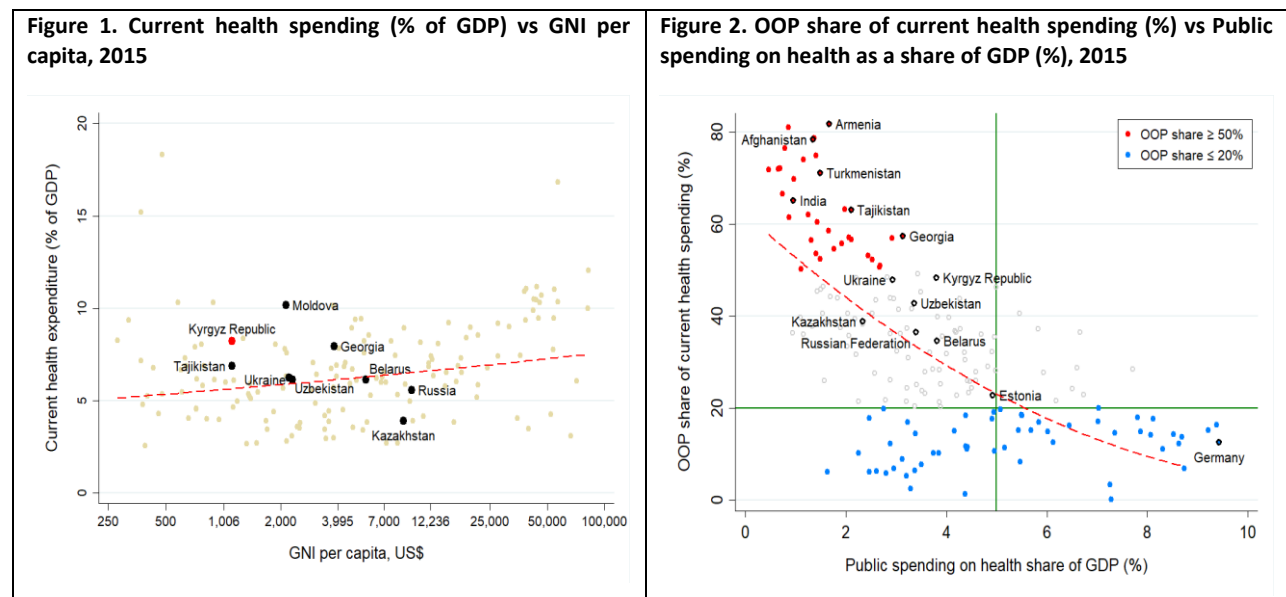
Table 1: Key Health Indicators (2016)

	Kyrgyz Republic	Lower Middle Income Countries
Life expectancy at birth	71.0	68.4
Under-5 Mortality rate (per 1,000 live births)	21.1	40.0
Infant mortality rate (per 1,000 live births)	18.8	30.8
Total Fertility Rate (number of children per women)	3.1	3.2
Prevalence of moderate and severe stunting*	12.9	23.1
Proportion of women receiving at least 4 antenatal care (ANC) consultations	94.6	82.6
Proportion of births attended by skilled health personnel (%)*	98.4	84.1
Contraceptive prevalence rate (% of women aged 15-49)*	42.0	47.8
Proportion of 1-year-old children fully immunized against DPT (%)	96.0	84.6
Proportion of 1-year-old children immunized against measles (%)	97.0	84.2

Source: World Development Indicators (2018)

*Data are from 2014.

8. **The prioritization of health is also evident by the relatively high levels of health spending (Figure 1 and Figure 2).** Between 2000 and 2015, current health spending increased from 4.4 % of GDP to 8.2 %. Despite substantial increases in government health spending in nominal terms, the composition of health spending has not changed substantially, and the health system is still predominantly financed by out-of-pocket (OOP) spending. Although OOP declined substantially between 2000 and 2007, the trend appears to have been reversed, with OOP spending increasing from 38.1 % in 2009 to 48.2 % of current health spending in 2015.



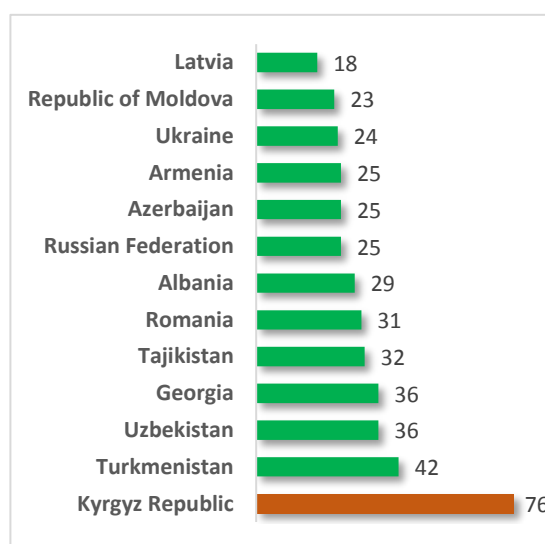
Source: World Development Indicators and WHO Global Health Expenditure Database (2018)

9. **Kyrgyzstan is featured highly in the international literature as a pioneer among the Central Asian and Former Soviet Union countries in health system reforms.** The country has adopted successive health reforms, from Manas (1996-2005) to Manas-Taalimi (2006-2011), and most recently Den Sooluk (2012-2018). Among early health reform features that made the country a pioneer in the region are:

- (a) An establishment as early as 20 years ago of a **Single Purchaser** of services, the Mandatory Health Insurance Fund (MHIF), which pools funds at the national level to purchase a standardized package of services across rich and poor regions;
- (b) An establishment of a **basic benefits package** (the State Guaranteed Benefits Package - SGBP) that guarantees the whole population with a minimum package of health services focusing on primary health care (PHC) and health prevention, at no or minimal cost;
- (c) A reform of the **service delivery model** to promote family medicine practice at PHC and to rationalize the excess hospital capacity inherited from the Soviet Union time;
- (d) An appreciable **financing priority** is given to the health sector, evidenced by a significant share of total government spending devoted to health; and
- (e) Strong **coordination** among donors to support a government-led health reform agenda, underpinned by a Sector-Wide Approach (SWAp) mechanism.

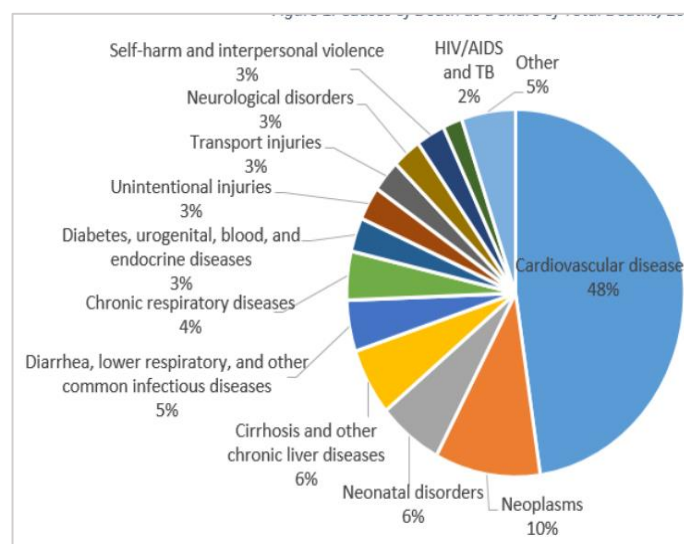
10. **Despite early successes, the reform agenda remains largely unfinished and universal entitlement to the SGBP does not translate to effective universal access to quality service that contributes to improving population health outcomes.** At a maternal mortality ratio of 76/100,000 live births in 2015, Kyrgyzstan is far from its MDG5 target for maternal mortality of 15.7/100,000. Although having performed better than neighboring Tajikistan and Turkmenistan in the early 1990s, in 2015 Kyrgyzstan had the highest incidence in both neonatal and maternal disorders among the Central Asian and Caucasus (CAC) countries (Figure 3). The burden of non-communicable diseases (NCDs) is on the rise. Disability Adjusted Life Year (DALY) loss due to chronic liver diseases nearly doubled from 705/100,000 population in 1990 to 1,268/100,000 in 2015 and stood at the highest level among CAC countries in 2015.⁴ Cardiovascular diseases have become the largest cause of death among the general population, accounting for 48% of all deaths in 2016 (Figure 4).

Figure 3. Maternal Mortality per 100,000 live births (2015)



Source: WHO World Health Statistics

Figure 4. Causes of death as a share of total death (2016)



Source: IHME

11. **While many factors outside the health sector could be responsible for health outcomes, the situation could be explained to a large degree by gaps in health sector's performance, particularly with regards to quality of health care services.** Given the fact that access to health services is widespread, poor performance in health outcomes points to weaknesses in the clinical quality of care. This has been seen with the persistently high maternal mortality. On the same note, about half of deaths among children under-five occur within 28 days of birth and about 80% of neonatal deaths occur within the first seven days. Considering advances in medicine, most neonates who die during the first month of birth in health facilities are likely to die from the poor quality of care provided during deliveries and the immediate postnatal period.

12. **There are several shortcomings in the structure and process of care that could lead to suboptimal outcomes in the quality of the care spectrum.** Specifically:

⁴ Global Burden of Diseases (2015)

- (a) **Structure aspect of quality of care:** throughout the country, it has been recognized that health infrastructure and equipment, for the most part, are rundown and poorly maintained. With a shortage of funding, the amount spent on essential inputs such as drugs is negligible. For example, only 1.7% of public health financing is devoted to the Additional Drug Package (ADP) – the package of outpatient drugs for the insured population. The SGBP, although covering diabetes, does not include HbA1c – the test considered the best practice to monitor blood glucose in diabetic patients. The effective monitoring and control of blood glucose are critical to the prevention of the costly irreversible long-term diabetes complications. Furthermore, challenges of the human resources within the health sector are critical with issues in availability, distribution, qualification, and motivation of personnel. During 2014-2015, primary care facilities were understaffed by 39%, and 41% of medical personnel in rural areas were close to retirement age.
- (b) **Process of care:** although the country has produced a large number of clinical guidelines, adherence to guidelines and protocols remains low. For example, a survey of district hospitals conducted by the World Bank in 2014 revealed that less than 6% of normal deliveries followed clinical protocol. For all important delivery complications, clinicians in surveyed hospitals were unable to identify key signs and symptoms, as well as appropriate management techniques. Reliable and valid data on quality of primary care services is much more limited. Extensive anecdotal evidence and expert opinions suggest substantial gaps in quality of care in the primary care.

13. **Shortcomings in the structure and process of quality can be traced back to various challenges and bottlenecks in service delivery, strategic purchasing, and governance set-up in the primary health sector.** In particular:

- (a) **Service delivery:** although family medicine was introduced as part of the early reform to decrease the utilization of hospital services, the Kyrgyz health system remains heavily hospital-centric: about 66% of government spending is devoted to the hospital sector. There is clear evidence of excess bed capacity and health facility redundancies in many areas. Care coordination and integration are almost non-existent. Although PHC should play a gatekeeping role, it remains largely unattractive to the population, which leads to widespread bypassing practice. While utilization of PHC has increased since 2000,⁵ so has the use of inpatient care. PHC facilities are also rather ineffective in the early detection and management of chronic diseases. For example, only 15% of diabetic patients in centers for general practitioners were reported to have an HbA1c test (mainly performed in private labs). Among hypertensive patients taking medications, about half still had suboptimal blood pressure. The high hospitalization rates for chronic conditions, such as hypertension and diabetes also point to inefficiencies and gaps in quality at the PHC level.
- (b) **Strategic purchasing:** MHIF as a Single Purchaser has not been able to exercise strategic purchasing for the quality of services. Until mid-2018, it used unadjusted capitation for PHC and

⁵ Utilization of outpatient care has been increasing since 2000, particularly in rural areas and among the poor. The proportion of population using outpatient services increased from 9 percent in 2000 to 13 percent in 2014. Among those who utilized outpatient services, almost 30 percent FMCs or polyclinics, 29 percent sought care at FGPs, and 21 percent sought care at FAPs. Only 9 percent of individuals sought outpatient care at private facilities.

case-based payment for hospitals, which further aggravates the incentives for low use of PHC and increased hospitalization. Hospitals are not allowed to provide outpatient services under SGBP, making it necessary for patients to be hospitalized for at least 2-3 days for such services that could easily be done in an outpatient setting. Capitation payments in primary care do not facilitate improvements in coverage for preventive services and best practices in the management of chronic conditions. The utilization of evidence-based interventions for non-communicable conditions, thus, is believed to be suboptimal. There is no systematic and evidence-based process for reviewing and revising the services and drugs to be included in the SGBP. The MHIF does not receive direct detailed reports from PHC facilities on clinical activities, and neither the MHIF nor MOH has the capacity to analyze clinical data to identify outliers and provide feedback to the providers.

- (c) **Sector stewardship and governance:** throughout, a system for monitoring, analyzing, and improving quality of care is largely absent, with the unclear division of roles and responsibilities between the MOH and MHIF. The MOH has an Evidence-Based Medicine unit which is staffed with one consultant and which has limited effectiveness in guiding the decision on the SGBP. There is also an Accreditation unit which is supposed to evaluate both public and private facilities on the structural aspect rather than clinical care aspect. Staffed with only 75 full-time employees at the central level, MOH's reach to the regions is limited. The role of regional health coordination in reform implementation described in various policy documents has not been realized in practice. Despite its important role in the health sector, managing some 80% of public spending on health, the MHIF has little authority to make decisions and exercise its strategic purchasing functions. The MHIF is obliged to contract all public providers and has little said over who can receive copayment exemption and what to be included in the benefit packages. Moreover, there has not been an effective collaboration between the MOH and MHIF for a common objective of improving quality of care.

14. **Over the last 2 years, some positive developments have taken place toward improving quality of care and rationalizing health services toward PHC.** Specifically: (i) in 2017, an Action Plan for optimization of tuberculosis (TB) care was adopted, which envisioned restructuring the network of TB hospitals and expanding outpatient TB treatment to ensure access and safety of service. TB service is gradually integrated into PHC and a new payment method for TB, per treated case, is being piloted at the PHC level; (ii) From the second half of 2018, 10% of the MHIF budget is set aside to pay for quality in both hospitals and PHC facilities, with quality being measured based on a Balance Score Card (BSC). The decision was inspired by a successful pilot of Result-Based Financing (RBF) in rayon hospitals supported by the World Bank, and positive experience in the PHC RBF pilots supported by the World Bank and the Swiss Agency for Development and Cooperation (SDC). This is a significant shift in Kyrgyz government's take on health financing where domestic resources are mobilized to improve quality through strategic purchasing using evidence-based practices.

15. **Going forward, the government is committed to steering health reforms in the right direction.** A decision was made to increase significantly earnings of PHC family medicine doctors from the end of 2018, conditioned on performance. This policy is a welcomed step and is expected to attract more physicians into primary care. In parallel, the government is also keen on continuing the unfinished agenda

of rationalizing secondary hospital network. With support from the current World Bank project, the Second Health and Social Protection Project (SWAp2), the MOH is procuring consulting service for developing a master plan for service delivery. Once completed, the master plan will provide recommendations on future infrastructure investments in the health sector and a framework for an integrated, patient-centered health service configuration.

16. **On this background, the government has prepared a new health sector program which sets priorities and draws the attention of different stakeholders to key issues in the health sector.** The new program - The Program of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019-2030 – adopted the motto “Healthy Person - Prosperous Country” to emphasize the importance of health as an investment to achieve economic development. The program has identified priority areas including improving primary health care and public health, rationalization of hospital and ambulance services, and strengthening the different building blocks of the health system. The program serves as a guiding document for the sector and an instrument to mobilize and harmonize development partners’ support, including the support from the upcoming PforR.

C. The Government Program SPHD2030 and the PHC Service Specific Area of the SPHD2030

17. **The SPHD2030 builds on 20 years of health reform in the Kyrgyz Republic** and is designed in parallel with other planning processes at the government level - the National Development Strategy for 2018-2040 and Government Program for Country Development for 2018-2022 “Unity. Trust. Creativity.” The program is the fourth document that defines major directions for further health care system. It defines the goals and objectives of health care system development until 2030. The ways to achieve these goals and objectives of the program have been developed for the next five years.

18. **The formulation process of the SPHD2030 followed an important principle of active participation of all stakeholders and from all regions of the Kyrgyz Republic.** The civil society representatives, promoting the interests of recipients of health services also actively participated in the process. The active involvement of the Jogorku Kenesh (Parliament) members, representatives of other government sectors, and local self-governing bodies was an indispensable condition for the development of the program. International and national expertise of the program was provided. Following the broad public consultations in all regions, approval by members of the intersectoral and Thematic Groups, the draft program was reviewed and approved by the Committees of the Jogorku Kenesh on Social Affairs, Education Culture and on budget and finances, and was submitted to the Government of the Kyrgyz Republic observing the procedure.

19. **Development of the modernized high-quality primary care is a key element of the strategy.** This will be founded on an integrated approach designed to meet the needs of the population and will include the following:

- (a) Create an efficient model of PHC that incorporates services for prevention, early detection of diseases and case management guided by the quality standards and other government commitments to secure the right to health.
- (b) Improve the continuity and coordination between PHC and secondary and tertiary level organizations in the provision of comprehensive, integrated and patient-oriented services.
- (c) Improve the quality and coverage of PHC services with a focus on improving health outcomes and on the principles of fair, equitable access for the entire population.
- (d) Strengthen the staff capacities for the provision of qualified PHC services.

20. **To achieve these goals, the SPHD2030 envisions a number of interrelated measures and activities, the most important ones include:**

- (a) Development and implementation of the list of services under the SGBP oriented to priority, widespread diseases, and conditions, guided by evidence-based medicine;
- (b) Improvement of PHC health care organizations' activity payment, taking into account the extended tasks and functions, as well as demographic indicators, results-based financing, and service quality improvement services.
- (c) Implementation of the patient electronic medical cards at the PHC level, integrated into all levels of healthcare, in order to ensure integrated patient management and provision of integrated services.
- (d) Ensuring access of medical workers to the approved clinical guidelines/protocols in all regions, with the use of electronic databases and libraries.
- (e) Development and implementation of a quality management system for PHC health services and its continuous improvement, regardless of ownership of providers.
- (f) Creation of educational and methodological centers in PHC organizations, with access to the electronic database of clinical guidelines and protocols, electronic scientific and medical library, and to educational organizations as part of continuous professional training.

D. The Program for Results Focus Areas

21. **The first result area will aim to integrate into service delivery key quality improvement elements**, namely a) quality care data collection and reporting, and b) bringing quality CPD to the 'bedside' through improving access and tailoring the content to the gaps. Several quality related recommendations from the Masterplan will also be implemented. **The second result area activities** will focus on strengthening strategic purchasing capacity within the MHIF by a) supporting coverage of evidence-based practices for selected conditions within SGBP; b) introducing blended payment mechanisms to increase utilization of selected evidence-based practices; and finally, c) realigning the government's drug reimbursement package with the evidence-based practices and priority high burden conditions. **The final result area** will aim to support the establishment of national governance structures and mechanisms and policy support for price regulation.

Result area 1: Integrating sustainable quality improvement mechanisms into service delivery

22. **Quality improvement activities within the service delivery result area will support two important components needed for building a sustainable national quality improvement system.**

Availability of quality care data for continuous quality monitoring and decision making is a key element. The set of proposed activities will improve the availability of quality care data for decision making by establishing a unified national quality care e-platform with the data analytics and reporting functions. Eight quality indicators on priority MCH and NCDs will be selected for routine collection and reporting as preliminary tracer indicators, one of which (vi) will be linked to disbursement. The proposed set of indicators is as follows:

- (i) Number of patients with diabetes (type 1 and type 2) who had at least one HbA1c test performed in PHC during the preceding calendar year
- (ii) Percentage of patients with diabetes (type 1 and type 2) who had HbA1c test during the preceding calendar year
- (iii) Percentage of patients with diabetes (type 2) whose most recent HbA1c level was higher than 9.0% among those tested during the preceding year
- (iv) Percentage of patients with blood pressure reported among patients who had an office visit to PHC (50-year-old and older)
- (v) Percentage of patients with hypertension and taking antihypertensive medications whose blood pressure (BP) was adequately controlled (<140/90) during the most recent measurement
- (vi) Percentage of pregnant women who received selected antenatal care services (hemoglobin measurement and urine microscopy) during the first trimester
- (vii) Percentage of patients with chronic stable coronary artery disease who were recommended an antiplatelet agent during the preceding year
- (viii) Percentage of patients with heart failure who were recommended angiotensin-converting enzyme inhibitor or angiotensin receptor blocker therapy during the preceding year

23. **Strengthening physician knowledge and competencies is the second area to be addressed within this result area.** An in-service training online platform will be developed to improve access to training materials, enforce unified quality standards for training materials, improve relevance to quality gaps, and facilitate the integration of online learning activities with the existing CPD framework.

24. **These activities map into the PBB of the MOH as shown in the Expenditure Framework Analysis above.** In particular, the sub-program budget measures include the development of an online database, availability of drugs and medical devices, and improving qualification of health workers, detailed in the Technical Annex's section on Expenditure Framework Analysis (table 6).

Result area 2: Strengthening strategic purchasing for quality by the Single Purchaser (MHIF)

25. **The result area on strategic purchasing will support** the introduction of blended payment mechanisms, revision of SGBP, and revision of the government drug reimbursement package.

26. **The blended payment mechanisms will be developed and introduced for primary care services to increase utilization of the selected evidence-based services such as HbA1c testing for diabetes patients and strengthen purchasing of quality.** The revision of the SGBP will be supported to align the benefits with the evidence-based cost-saving and cost-effective practices and increase coverage for selected evidence-based priority services.

27. **Strategic purchasing operations will also support the revision of the Additional Drug Package program funded by the MHIF.** The medication list covered by the reimbursement program will be revised to maximize coverage for priority conditions selected for quality improvement and to better align the program with evidence-based cost-effective practices.

28. **These activities squarely fall under the program 2 in the PBB of the MHIF** (providing PHC services) as shown in the Expenditure Framework Analysis and detailed in table 7.

Result area 3: Strengthening health sector stewardship and governance for quality improvement

29. **National coordination and governance mechanisms for quality improvement are essential to building an efficient, effective and sustainable national quality improvement framework in the country.** Although there is staff within the MoH working on various elements of quality improvement (evidence-based medicine, accreditation, licensing), a designated unit and staff tasked with improving quality are lacking. The governance activities will aim to establish a QI unit with clear terms of reference and expanded the role for quality improvement by consolidating existing staff and structures into a single unit. Capacity will be built within the unit for quality measurement and improvement techniques and methodologies.

30. **Regulation of medication prices and prescription practices can strengthen quality through improved coverage.** There were several initiatives to develop and implement price regulation in the country, however, none has come to be endorsed and implemented. The Program activities will support the government in the development and implementation of price regulation policies for the ADP.

31. **These activities fall under Budget Measure 7 in program 1 of the MOH's PBB,** detailed in the Technical Annex's table 6 (Provision of monitoring, analysis, and strategic planning, stewardship of the health sector).

E. Strategic Relevance and Technical Soundness of the Proposed PforR

Strategic Relevance

32. **The proposed Program's focus on the quality of PHC will constitute an important step to help to advance the country toward the global and its own commitment to UHC.** UHC means that all people and communities should have access to high-quality health services they need without facing financial hardship. Delivering quality health services is high on the agenda and is considered essential to UHC.⁶ Although Kyrgyzstan has committed to UHC and has an SGBP that provides universal entitlement to basic services, it does not have *effective* universal coverage in a sense that the services of high quality are not available to the whole population at low cost. Improvements in the quality of services in primary care will fill in this gap. It will increase the attractiveness and effectiveness of PHC, thus reduce unnecessary services and hospitalizations with much higher costs to the system and the population. It addresses a

⁶ Delivering quality health services: a global imperative for universal health coverage. Geneva: World Health Organization, Organization for Economic Co-operation and Development, and The World Bank; 2018.

structural bottleneck on the pathway toward the ultimate goals of the health system, which are improving health outcomes and providing financial protection relating to health care.

33. **The Program objectives are well aligned with the Bank’s twin goals of reducing poverty and sharing prosperity.** The Program supports the areas under the government health program (SPHD 2030) that match the strategic directions outlined in the CPF for 2019-2022. The CPF objective on the development of skilled human capital aims to raise the quality of health care and opportunities for adult life-long learning through the application of new technologies, which will be the focus of the Program. Quality of education/learning, relevance critical gaps and policy priorities are highlighted as key areas for action within CPF, which are incorporated into the Program within the context of quality care improvement.

34. **The bottlenecks identified in the most recent SCD are considered in developing the Program objectives and results.**⁷ The quality deficit in social services, including health services, is highlighted as one of 11 constraints to advancing the Bank’s twin goals. A lack of comprehensive, cohesive and long-term policy frameworks in various public service areas is noted as a key missing area. The Program aims to improve quality of care by supporting comprehensive sustainable policy and implementation frameworks by establishing systems, structures, and policies on continuous quality care data collection, reporting, feedback, and action.

35. **There is a strong justification for the Bank and JFs to support PHC.** Globally, investing in PHC has been considered the most cost-effective intervention that has a large potential for generating positive externalities. Yet it is also observed that PHC has not received adequate attention and priority it deserves. In many countries, PHC is typically underfunded while elite capture often draws public resources toward hospitals. In the case of Kyrgyzstan, although the government has announced a strong intention to focus more on PHC, how it will operationalize the promise has yet to be seen given the country’s resource constraint situation. This operation supports the government’s effort to focus on PHC while emphasizing the importance of having a holistic approach to service delivery. This is also an area where other private investors, including IFC, and new donors are unlikely to come in.

36. **Addressing quality of care at the PHC is a challenging endeavor which the Bank is uniquely qualified to support.** Despite various studies, pilots and initiatives supported by DPs, none has attempted to tackle the issue of quality at primary care, or quality in general, in a systematic and comprehensive manner. Quality care improvement is a complex long-term process that requires concerted health systems level changes to create a sustainable quality improvement culture. Sustainable quality improvement systems are difficult to establish and often require extensive technical and political support. The proposed operation, approaching quality from multiple angles - service delivery, strategic purchasing, and governance – will help to move the system to the next stage. The Bank and JFs’ engagement is critical because no other partner would have comparative advantages and the necessary resource envelop to support such a long-term and focused agenda.

⁷ The World Bank Group (2018) Kyrgyz Republic: From Vulnerability to Prosperity. A Systematic Country Diagnostic.

Technical Soundness

37. **The proposed operation builds on current evidence base on quality improvement efforts and good practices from other countries considering the health care and socio-economic context in Kyrgyzstan.** Sustainable quality improvement systems require, at a minimum, reliable and valid quality care measures, health information or data management systems to collect, manage, analyze and report quality care data, quality care improvement methods and interventions integrated into the health system and national governance and organizational structures/mechanisms. The PforR interventions are aligned with the best global practices, which suggest that a focus on processes and systems rather than structural interventions is more effective in improving the quality of care.^{8,9} The three recent reports on the quality of care^{10,11,12} highlight several categories of interventions for quality improvement, including setting standards; sharing information and education for health workers, managers, and policymakers; engaging and empowering patients, families and communities; use of continuous quality improvement programs and methods; establishing performance-based incentives; and legislation and regulation. As highlighted in the Lancet Global Health Commission on High-Quality Health Systems in the SDG Era, governance is a critical component of high-quality systems and forms the basis of any quality intervention. The Commission recommends the development of policies and guidelines for quality and the compilation of an open-access health system dashboard for monitoring progress toward a high-quality health system. This PforR is built around two of the key universal actions for improving the quality of care as outlined in the Commission's report: govern for quality and transform the health workforce through competency-based clinical education.

38. **Kyrgyzstan has extensive health and insurance data collection systems, but the systems are not integrated, collect limited quality care data and do not have the capacity for quality care monitoring and action.** A comprehensive quality improvement governance at the national level is extremely limited with various governance functions partially carried out by different players with little overall coordination and cohesion. For instance, the MHIF is involved in purchasing for quality with limited role and capacity to develop quality measures and design/implement improvement interventions. The MoH has staff that is responsible for various siloed components of quality improvement such as evidence-based medicine or provider accreditation. A national body responsible for quality improvement as a concept that commissions situational analyses, identifies priorities and indicators, implements interventions and sets the long-term strategic vision for the country is missing.

⁸ Quality of care encompasses three dimensions: structure (that is, inputs), clinical processes (that is, interaction between health workers and patients), and patient outcomes (that is, clinical outcomes, morbidity, and mortality).

⁹ Smith, O., & Nguyen, S. N. (2013). Getting better: improving health system outcomes in Europe and Central Asia. The World Bank.

¹⁰ National Academies of Sciences, Engineering, and Medicine (2018). Crossing the global quality chasm: Improving health care worldwide. Washington, DC: The National Academies Press.

¹¹ WHO, OECD, and World Bank (2018). Delivering quality health services: a global imperative for universal health coverage. Geneva: World Health Organization, Organisation for Economic Co-operation and Development, and The World Bank.

¹² Kruk, M. E., Gage, A. D., Arsenault, C., Jordan, K., Leslie, H. H., Roder-DeWan, S., ... & English, M. (2018). High-quality health systems in the Sustainable Development Goals era: time for a revolution. The Lancet Global Health.

39. **Physician knowledge and competencies in evidence-based practices are critical to sustainable quality improvement. National CME frameworks that build on adult life-learning principles and match existing critical gaps are considered as best practices.** Kyrgyzstan has a longstanding CPD framework that is mostly based on didactic learning, but also ready to accommodate and internalize new concepts in CPD. Currently, according to the national CPD requirements, all physicians are required to obtain 250 hours learning credits (50 hours a year) every 5 years to maintain ‘license’ to practice. Credit hours could be obtained by attending training provided by the Institute for Postgraduate Medical Education or other certified training. Many courses eligible for the credit hours are offered at the Institute or its branches, which limits geographical and financial access. Furthermore, the data and systems are lacking that can link learning content and mode to existing gaps and various learning styles.

40. **The Program operations will focus on building a holistic sustainable system for quality improvement in primary care.** Selected high burden MCH and NCD conditions will be part of the model building exercise that will be used in all three result area activities; the set of indicators could be revised and/or expanded in future to align with the priorities.

F. Program Expenditure Framework

41. **The Program expenditure is situated against a relatively positive fiscal outlook of the Kyrgyz Republic.**¹³ Real GDP growth was projected to be 4.9% in 2019 and averaged at 4.6% during 2019-2022. Current health spending is estimated at 8.2% of GDP and government health spending accounts for 11% of total government spending.¹⁴ Although economic growth is typically associated with an increase in government spending on health, the potential for the Kyrgyz government to increase health spending is limited given that the Kyrgyz Republic has the highest debt to GDP ratio among all Central Asia countries. However, there are good opportunities for raising additional revenue through increasing taxes on harmful consumption goods such as tobacco, alcohol, sugary beverages and fatty foods. Such measures also have the potential to decrease future health expenditure and promote economic growth through their positive effects on health, assuming that the tax is high enough to affect consumption¹⁵

42. **In essence, the SPHD2030 is an enhancement of the current health sector program and costing of SPHD was estimated as *additional* to the current spending in the sector.** The SPHD2030 cost estimate is also not exhaustive - it includes additional activities by concerned stakeholders involved in the SPHD2030’s program of action but does not take into account the full cost needed to achieve the vision of SPHD2030. For example, for one of the proposed activities – revising the State Guaranteed Benefit Package (SGBP) – SPHD2030 costing reflects the timing of the technical working group in charge of the revision only, it does not estimate what the cost of the revised SGBP itself will be. This limitation is understandable given the lack of data on many aspects and the ambition to project health sector activities over the period of 12 years. At the same time, the implication of such limitation is that the expenditure framework analysis will focus almost exclusively on the health sector budget as reflected in the

¹³ International Monetary Fund (2018) Kyrgyz Republic, IMF Country Report No. 18/53. February 2018

¹⁴ WHO (2018) Global health Expenditure Database

¹⁵ The World Bank (2018) Fiscal Space for Health in the Kyrgyz Republic. Background Report. Unpublished

government budgeting and execution cycle, as well as in the Medium-Term Budget Framework (MTBF) for 2019-2021.

43. **The following will:** (1) provide a brief overview of public domestic health expenditure in the Kyrgyz Republic, its principal sources of financing, intermediary agencies that manage public health budget - MOH and MHIF – and their budget programs as specified in the recently adopted Program-Based Budgets (PBBs); (2) assess the Program budget performance; and (3) analyze the PforR expenditures in each Result Area in view of the PBBs.

44. **The analysis does not include development budget** (infrastructure), which is approved through a completely different process and timeline compared to Republic Budget for the health sector. Infrastructure investment is outside the scope of the Program.

Government Health Expenditure in the Kyrgyz Republic

45. **The Kyrgyz Republic has a rolling 3-year Medium Term Expenditure Framework (MTEF)**, which provides reasonable predictability in the budget for all sectors.

46. **Besides external aids, public expenditure for health in the KR comes from three main sources:** Republican (central) budget, local budget, and revenue from mandatory health insurance (MHI). Setting asides development budget (infrastructure), of the three sources, the most significant is Republican Budget, accounting for some 85% of the total public health spending in the last three years. Local Budget accounts for a small and decreasing share, from 10% in 2013 to 2% in 2017.

Table 2: Share of domestic public expenditures on health, net of the development budget

	2015	2016	2017 (preliminary)
Republican (%)	84	86	85
Local (%)	6	3	2
MHI (%)	10	11	13
Total (%)	100	100	100
Total (thousand Kyrgyz som)	14,396,300	15,328,500	16,498,300

Source of data: MOF (provided as part of 13% budget target verification)

47. **Government health expenditure in the Kyrgyz Republic is managed by two main entities:** the MOH and MHIF. As a Single Purchaser of health services in the country, MHIF manages 80% of the domestic public financing for health, contracting with 261 health institutions providing health care services at all levels.

Table 3: Government health expenditure by MOH and MHIF, 2017 (actual)

	Thousand Kyrgyz som	USD equivalent	%
MHIF	13,064,888	192,130,700	80
MOH	3,211,742	47,231,494	20
Total MOH and MHIF	16,276,629	239,362,194	100

Source of data: Integrated Fiduciary Reports (IFRs)

48. **For budget formulation, execution and reporting, a uniform budget classification is used for all levels of the budget system** that ensures the unification of the forms of budget statistics and

comparability with international practice. The budget classification is part of the Chart of Accounts used for the bookkeeping of operations on the execution of budgets and economic activities of budgetary institutions in the general government sector. The budget classifications are in line with the basic principles of the GFSM 2001. Budget agencies compose their statistical reports on a modified cash basis. The main classification for budget appropriations and budget execution include economic, functional and administrative classification.

Budget Performance

49. **The budget law allows for some flexibility in adjusting the budget through two amendments in a budget year:** before June 1 and before November 1 of the current fiscal year. In-year reallocations of budgetary appropriations between items of the economic classification of expenditures are permitted. In-year reallocations of budgetary appropriations between medical institutions within the limits of one administrator of budgetary funds are also permitted.

50. **The Integrated Fiduciary Reports (IFRs) distinguish three key concepts** when it comes to budget approval and execution:

- (i) “Approved plan,” or originally approved budget, that is stated in the Law and approved by the Parliament, usually in December of the preceding year;
- (ii) “Distribution plan,” or the budget that is revised during the course of the year and is also approved by the Parliament; and
- (iii) “Cash,” or the actual expenditure.

51. **Comparing “cash” with “distribution plan” reveals that the budget execution rate is high for MHIF but lower for MOH, which was only 83% in 2017.** Within MHIF, the expenditure on the SGBP at PHC and on the ADP, the two main sub-programs in PHC, have the execution rate in the order of 100%.

Table 4. Execution rate of the Republican Budget, 2015 – 2017 (%)

Year	Health Sector	MOH expenditure	MHIF expenditure	PHC SGBP	ADP
2015	97	91	100	100	92
2016	95	88	96	98	102
2017	92	83	95	95	104

Source of data: IFRs

52. **At the same time, comparing “distribution plan” with “approved plan” reveals how much short-term predictability one could obtain with the budget that is originally approved.** As presented in table A3.4, the Republican budget for the health sector as a whole was actually revised up during the year of implementation over the last 3 years, indicating that initial budget planning may have erred on the conservative side. This is largely true for sub-programs SGBP and ADP, although there was a dip in ADP in 2017.

Table 5. Short-term predictability of the Republican Budget, 2015 – 2017 (%)

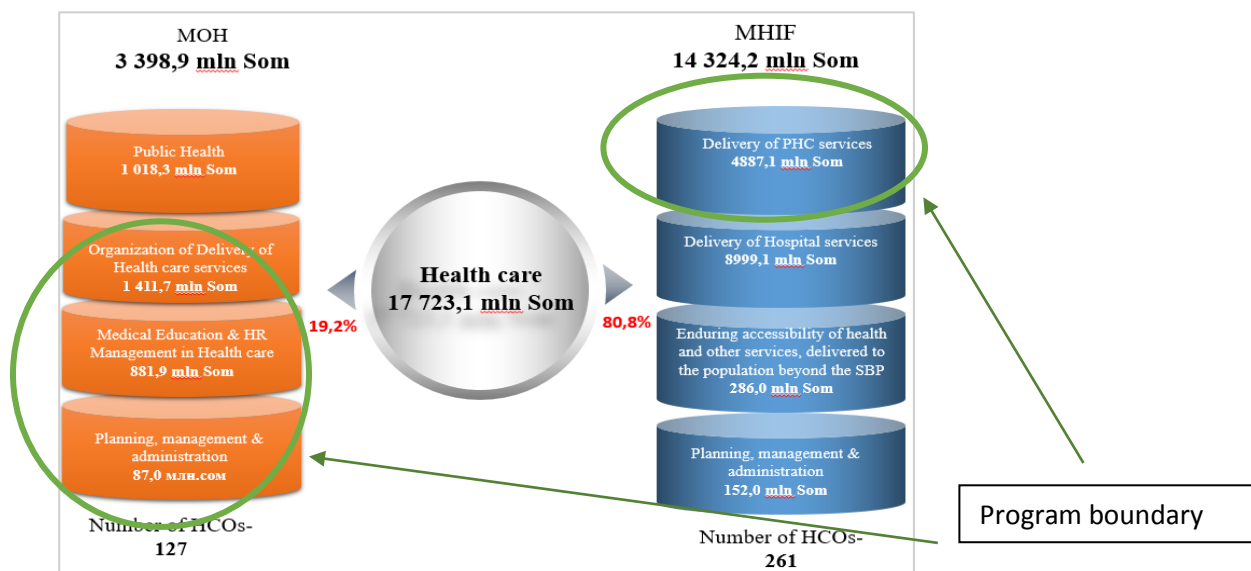
Year	Health Sector	MOH expenditure	MHIF expenditure	PHC SGBP	ADP
2015	106	104	107	104	100
2016	103	95	105	103	99
2017	104	117	104	101	87

Note: This indicator measures the share of the revised budget in the originally planned budget for the year in question. Source of data: IFRs

Mapping the PforR Expenditures by Result Area to the PBB

53. **Starting in 2019, PBB will be piloted in two sectors – health and transport.** In the health sector, the PBB provides an additional budget classification method: budgets of the MOH and MHIF are classified into 8 main programs (4 under MOH and 4 under MHIF – figure 5). One of the main objectives of the PBB is to strengthen the managerial and financial independence of health care organizations and increase their responsibility for delivering quality services. For example, by providing certain flexibility on economic classification line items, the PBB provides for retaining of savings within the entities (MOH and MHIF) if they generate efficiency by optimizing on allocative and technical efficiency.

Figure 5: Program-Based Budgets for the health sector (Preliminary 2019 budget)



Source: MOH presentation at High-Level Round Table on SPHD2030, Bishkek, October 2018

54. **Classification of health sector budget by programs as shown in figure 5 makes it easy to draw a boundary for the PforR expenditure framework.** As shown, *purchasing of PHC services* is one of the four programs under MHIF. The MOH, while not purchasing the services delivered at the PHC, is in charge of *organizing the delivery of services, medical education, management of human resources for health (HRH), and planning and management that includes health information system*. Thus, the PHC program under MHIF and three programs under MOH (all but Public Health) together form the expenditure framework that corresponds to the boundary of the PforR (focusing on quality of the PHC – with MHIF

being responsible for PHC service specifics and MOH plays the functions of cross-cutting areas promoting quality at PHC).

55. **The PforR consists of 3 Result Areas:** (1) Integrating sustainable quality improvement mechanisms into service delivery; (2) Strengthening strategic purchasing for the quality of care; and (3) Strengthening health sector stewardship and governance for quality improvement. Main activities under Result Area 1 include setting up an online platform for data exchange, developing several databases, developing online training programs, reporting quality data online by the PHC facilities, and implementing measures recommended by the master plan for service delivery. This fall largely under different budget measures (BM) in programs 1, 3, and 4 of the MOH’s PBB as shown in table 6 below. Specifically, BM 8 under program 1 provides for an implementation of eHealth activities, setting up online systems and databases, etc. Similarly, BM 3 under Program 4 on upgrading qualification of health care workers serves as a basis for the online continuous medical education supported by the PforR. Of note is that the BM 4 under Program 3 “Provision of accessibility of drugs and medical devices at healthcare organizations” applies to both PHC and hospitals and is likely to weigh heavily toward hospitals. Therefore, the amount reported as “directly related to the Program for Results” and its corresponding share of the MOH budget is likely to overestimate the actual spending and budgeting for PHC.

56. **Result Area 3 proposes to set up a Quality Improvement Unit in the MOH.** This will fall largely under BM7 of Program 1, on the provision of monitoring, analysis, and strategic planning of the health sector.

Table 6: Excerpt from MOH’s PBB with budget measures directly related to the PforR (thousand Kyrgyz Soms, 2017-2021)

Budgetary programs and budget measures (BM)	2017	2018	2019	2020	2021
Program 1: Planning, governance & administration					
BM 7: Provision of monitoring, analysis & strategic planning/stewardship of health sector	3,058	4,223	5,088	5,088	5,088
BM 8: Implementation of online systems and databases	24,822	26,929	28,276	28,276	28,276
Program 3: Organization of health care services delivery					
BM 1: Improvement of quality of health services delivery at PHC level	65,883	67,373	70,741	73,571	75,578
BM 4: Provision of accessibility of drugs and medical devices at healthcare organizations	0	9,069	120,000	124,885	128,272
Program 4: Medical Education & Management of HRH					
BM 3: Improvement/upgrading of qualification of health care workers	113,071	143,424	149,161	154,597	158,483
Total budget mapped to the Program	206,834	251,018	469,336	513,463	552,124
Total MOH budget	3,211,742	3,319,867	4,602,619	3,773,924	3,857,948
Program budget as % of MOH budget	6%	8%	8%	10%	10%

Source of data: MOF (MOH’s Program Based Budget approved on November 29 2018); Note: 2017 and 2018 figures were retrofitted to the PBB classifications. 2017 figures are actual expenditure while 2018-2021 figures are planned budgets

57. **The PforR's Result Area 2 (Strengthening strategic purchasing for the quality of care) falls squarely under the Program 2** (delivery of PHC services) of the MHIF (Table 7). All budget measures under Program 2 are relevant to the PforR except for emergency care (not shown in the table). In the Result Area 2, the main activities include revising the and increasing financing for the drug lists under the SGBP and Additional Drug Package (ADP), as well as revising the provider payment to incorporate performance-based indicators. As shown in Table 7 below, budget related to the PforR accounts for 90%-91% of MHIF's budget for PHC, and 29%-31% of MHIF's total budget.

Table 7: Excerpt from MHIF's PBB with budget measures directly related to the PforR (thousand Kyrgyz Soms, 2017-2021)

Budgetary programs and budget measures (BM)	2017	2018	2019	2020	2021
Program 2. Delivery of PHC services					
BM 2: Provision of basic health services at PHC for the whole population (SGBP)	3,532,949	3,467,193	4,341,818	3,738,016	3,797,824
BM 3: Provision of TB care in PHC	456	30,000	33,372	35,000	35,000
BM 4: Drugs reimbursed under the SGBP for the whole population	35,856	55,000	55,000	55,000	55,000
BM 5: Drugs reimbursed under the ADP for insured population	228,560	264,435	276,070	280,000	290,000
BM 6: Provision of fee-based services beyond the SGBP	57,196	75,539	77,291	73,280	76,944
BM 7: Provision of non-medical & other services by the HCOs, operating under the Single Payer System	181,007	275,106	239,280	266,882	280,226
BM 8: Incentives for Family Group Practices based on quality performance	3,500	4,500	100,000	100,000	100,000
Total budget mapped to the Program	4,039,524	4,171,773	5,122,831	4,548,178	4,634,994
Total MHIF budget	13,064,861	14,230,326	15,030,944	14,640,465	14,932,071
Program budget as % of MHIF budget	31%	29%	34%	31%	31%

Source of data: MOF; Note: 2017 and 2018 figures were retrofit to the PBB classifications. 2017 figures are actual expenditure while 2018-2021 figures are planned budgets

58. **As shown in table 7, the most important budget measure in the PHC program by MHIF** is the provision of the basic health services for the whole population, representing the SGBP at PHC (BM 2). The five-year trend shows a gradual increase in nominal term except for a dip in 2018. A similar trend is observed for the ADP (BM5). Special attention is warranted for BM8, which shows a significant increase planned for 2019-2021, demonstrating the government intends to roll out the performance-based payment scheme for PHC under the scheme to improve salary for family medicine physicians.

59. **The expenditure patterns over the last two years reveal that most of the MOH and MHIF budget was spent on staff, leaving very little for goods, services, or maintenance (table 8)**. Specifically, roughly

66% of MOH’s budget and 75% of MHIF’s budget within the Program was spent on salary and social contribution. Under MHIF, about 20% of the total expenditure under the program “Delivery of PHC services” went to goods and services, a large part of this is for pharmaceuticals.

Table 8. Breakdown of MOH and MHIF budget under the Program by major economic classification, 2017-2018 (%)

	MOH		MHIF	
	2017 (actual)	2018 (estimate)	2017 (actual)	2018 (estimate)
Salary	56%	54%	66%	65%
Social Payment	10%	9%	11%	11%
Goods and services	34%	35%	19%	20%
Others	1%	1%	4%	4%
Total	100%	100%	100%	100%

Source of data: MOH and MHIF

60. **The magnitude of Joint Financiers’ commitment to the PforR is compared to the government budget channeled through the MOH and MHIF over the lifetime of the proposed operation, 2020-2024 (table 9).** Based on budget data during 2017 – 2021, it is assumed that the MOH and MHIF nominal budget under the Program will be increased during 2022-2024 a rate of 3% and 4.2% annually respectively. The 5-year budget for the MOH and MHIF is thus estimated at 2,040.9 and 24,258.5 million Kyrgyz soms respectively, giving a total of more than US\$ 377.18 million.¹⁶ With this, Joint Financiers’ commitment constitutes nearly 9% of the total Program’s budget.

Table 9. Estimated five-year budget for the Program

	Kyrgyz som (thousand)		US\$ (million)		
	MOH	MHIF	MOH	MHIF	Joint Financiers*
CY 2020	386,398	4,548,178	5.54	65.16	7.35
CY 2021	395,697	4,634,994	5.67	66.40	8.65
CY 2022	407,419	4,829,231	5.84	69.19	11.55
CY 2023	419,489	5,031,608	6.01	72.09	3.85
CY 2024	431,915	5,242,465	6.19	75.11	5.60
Total 2020-2024	2,040,918	24,286,476	29.24	347.94	37.00
Government budget				377.18	
Program budget				414.18	

Source of data: PBBs for the health sector, MOF. * Joint Financiers disbursement schedule is based on planned disbursement schedule at this moment and is subject to change.

¹⁶ This assumes an exchange rate of 69.8 Kyrgyz som for 1 US\$. This rate is used by the Kyrgyz Government for 2019 budget as stated in the Explanatory Note to the Budget

G. Economic Justification of the Program

The cost associated with the Kyrgyz Republic’s health and health care system today

There is a relative deficit of human capital in the Kyrgyz Republic

61. **Despite a promising macroeconomic background, targeted investment in human capital development is needed in the Kyrgyz Republic.** A Kyrgyz child born today will be 58 percent as productive when she grows up as she could be if she enjoyed complete education and full health (see *HCI brief*). In addition, the Kyrgyz Republic only holds 27.5% of its total wealth as human capital. This is far below ECA low- and middle-income peers (37.0%), global lower middle-income countries (50.6%) and global low-income countries (40.8%).

Table 10. Per capita wealth by sources in comparison (US\$)

	Per capita wealth (2014 U.S. dollars at market exchange rate)				Human capital as a share of total wealth
	Total Wealth	Produced capital	Natural capital	Human capital	
Kyrgyz Republic	24,429	6,159	12,570	6,729	27.5%
ECA low- and middle-income	70,530	27,760	19,978	26,116	37.0%
Global lower middle-income	25,948	6,531	6,949	13,117	50.6%
Global low-income	13,629	1,967	6,421	5,564	40.8%

Source: The Changing Wealth of Nations, WBG, 2018

62. **The relative deficit of human capital in the Kyrgyz Republic is an important preliminary economic justification** for the PforR, given its focus on improving health (a core component of human capital) across the life course, particularly in working age adults.

Weak primary care generates substantial societal costs

63. **Conditions that could be prevented or better managed by stronger primary care imply a substantial cost to the economy of the Kyrgyz Republic,** both directly (through health system spending) and indirectly (through reduced labor productivity, for example). A recent interagency report¹⁷ estimates that some 30% of total public health care spending in the Kyrgyz Republic is directed to the management of chronic non-communicable diseases (NCD), equivalent to 5.3bn som (US\$ 76.1m; data taken from Figure 5). More specifically, the report estimates that 13.4% (2.4bn som) of public health care spending is directed towards cardiovascular disease (CVD) and 4% on diabetes (0.71bn som), two NCD that appear in the DLI linked to this PforR. It should be noted, however, that GoKR is almost certainly under-spending in this area given the high prevalence of undiagnosed NCD. Chronic illness also exerts a substantial macroeconomic impact through indirect means such as early death, inability to participate in the workforce and/or “presenteeism. Adding indirect costs to direct government spending means that the total economic cost of NCD to the Kyrgyz Republic economy is 19.9bn som (US\$ 284mn) per year, equivalent

¹⁷ Prevention and control of non-communicable diseases in Kyrgyzstan: the case for investment. WHO Regional Office for Europe, Copenhagen.

to almost 4% GDP. In the absence of stronger primary care, this figure is likely to rise given the Kyrgyz Republic's growing population and worsening prevalence of NCD risk factors.

64. **Improving antenatal care, another focus of the PforR will also have wider societal benefits.** Neonatal complications are the second most important cause of death and disability combined in the country, according to IHME data. The burden of disability due to neonatal complications has risen by 22% in the past decade and has a life-long impact on individuals and families - babies who survive face greater risks of significant health problems throughout their lives, translating into significantly increased costs to healthcare and the broader economy. Maternal deaths also have far-reaching and long-standing ramifications, including increased mortality among children whose mothers had died. Difficulty in managing the remaining household is common. Children may be taken out of school, sent away to live with other families or, if girls, married earlier than if their mother had remained alive¹⁸. Each of these steps can further entrench poverty and limit human capital development.

65. **There is thus a strong economic case, *a priori*, for investing in better prevention, early detection and effective management in primary care.** The cost-benefit of such interventions is discussed further below.

Expected economic benefits of the PforR

66. **The PforR comprises complex system interventions that work on service delivery, financing/purchasing, and governance as illustrated in the PAD** by Figure 7 ("A theory of change for the Kyrgyz PforR"). Based on this, the expected results and expected economic benefits of the PforR comprise increased efficiency in health spending, by shifting care from the hospital to the primary care sector; improved health status due to averting premature deaths and DALYs, through improved access and quality of primary care; and, improved financial protection, through reduced financial risk, reduced catastrophic health spending, reduced precautionary savings for health, and increased investment/spending in other economic activities.

Increased efficiency in health spending

67. **In principle, efficiency in health spending will be achieved through multiple channels.** The biggest gains are likely to come from optimizing of service delivery - in particular, shifting management of conditions amenable to primary care out of the hospital sector. Efficiency should also be improved by revising primary care payment mechanisms and linking payment more explicitly to the outcomes of care. Revising the SGBP and ADP based on cost-effectiveness considerations will improve the technical and allocative efficiency of government spending, in particular by drawing on international best practice and evidence to support the design of more accessible and efficient packages of care (making the HbA1c test more widely available, for example) and promote the use of generic drugs. Expanding the SGBP and ADP also supports allocative efficiency, by reducing the number of patients paying for services through OOP or informal payments.

¹⁸ Miller S and JM Belizán (2015), The true cost of maternal death: individual tragedy impacts family, community and nations. *Reprod Health*. 2015; 12: 56

68. **Finally**, improving the quality of care over the long run (by improving the reporting and analysis of health care quality indicators, establishing a national quality monitoring and improvement agency, and strengthening continuing medical education) can be expected to generate savings through better prevention and management of maternity and NCDs, thus avoiding complications.

69. **Not all of these anticipated pathways can be quantified.** What follows, therefore, is limited to the most important and relevant empirical literature that can guide estimation of the efficiency of this PforR.

Efficiency gained by shifting chronic disease management from the hospital sector to primary care

70. **There is substantial international evidence that strengthening primary care and reducing dependency on the hospital sector is more efficient for the health system¹⁹.** Figure 5, (“Program-based budgets for the health sector”) shows that half the current government spending on health is directed to hospitals and around a quarter to primary care. This is a typical pattern for less developed health systems. It is not typical, however, for more advanced health systems that have reinvested such that most routine care for maternity and NCD gets provided by a comprehensive and proactive primary care sector. The economic benefit of such a reallocation in the Kyrgyz Republic is modeled below.

Efficiency gained by expanding benefits covered by SGBP and ADP, and promoting the use of generic medications

71. **Wider accessibility of medications in primary care offers gains in both efficiencies of service delivery and in population health status.** The 2013 STEPS survey²⁰ found that only four in ten Kyrgyz adults with diagnosed hypertension were taking medication, and only two in ten if undiagnosed hypertension was included. Many reasons are likely to underlie this under-treatment, but financial barriers are particularly relevant. High out-of-pocket payments for outpatient medicines are the main cause of catastrophic and impoverishing expenditure²¹, with around 1 in 12 families in the Kyrgyz Republic facing catastrophic health expenditure (defined as more than 15% of household expenditure after food costs) each year²². Paying for treatment for long-term conditions such as hypertension is also problematic for many²³. Together, these findings imply that there are substantial health and efficiency gains to be had by widening the accessibility of primary care medications. In addition, the use of generic drugs and centralized procurement has shown to be a big cost saver in other health systems, given that the cost of

¹⁹ WHO, 2018: Building the economic case for primary health care: a scoping review. WHO publishing, Geneva.

²⁰ WHO Regional Office for Europe (2016). Increasing information on noncommunicable disease risk factors in the Region

²¹ WHO Regional Office for Europe (2016). Long-term trends in the financial burden of health-care seeking in Kyrgyzstan, 2000–2014; and Pharmaceutical pricing and reimbursement reform in Kyrgyzstan.

²² WBG, 2014: Kyrgyz Republic: Public Expenditure Review Policy Notes, Health. World Bank Group, Washington D.C.

²³ Abdraimova A, Iliasova A, Zurdinova A (2015). Underlying reasons for low levels of seeking medical care in men: policy research document. Bishkek: Health Policy Analysis Center; and Abdraimova A, Urmanbetova A, Borchubaeva G, Azizbekova J (2014). Cost-estimation of medicinal treatment of hypertension in the Kyrgyz Republic with the view of creating possible drug supply mechanisms ensuring free-of charge HTN treatment: policy research paper no. 83. Bishkek: Health Policy Analysis Center.

generic alternatives can be 10% to 90% of the cost of branded drugs. In the EU health care system, the use of generic drugs is estimated to have generated around 25 billion euros of savings each year.

Improved health status

Improved health status through improved family planning and antenatal care

72. **The PforR is will increase the availability and quality of antenatal care, by expanding the provision of iron supplements and folic acid for pregnant women**, for example. There is good evidence on the benefit of comprehensive antenatal care on reducing the risk of neonatal complications, the second highest cause of death and disability in the Kyrgyz Republic. A Cochrane Systematic Review²⁴ found that continuous models of antenatal care were associated with reduced risk of preterm birth (relative risk 0.76, 95% CI 0.64 to 0.91) and fetal loss/neonatal death (relative risk 0.84, 95% CI 0.71 to 0.99). Another systematic review and meta-analysis found that enhanced models of antenatal care were associated with a statistically significant 16% reduction in the risk of pre-term birth compared to routine care²⁵.

73. **Regarding maternal outcomes**, four studies, one each in Afghanistan, India, Nigeria, and Mexico, modeled the health gains of various strategies to reduce maternal mortality²⁶. All four studies estimated that universal pre-natal care would reduce maternal mortality by around 2% in their respective setting. Greater health gains can be achieved by improving family planning, access to safe abortion and access to specialist obstetric services for intrapartum complications. Expansion of these services is estimated to be as cost-effective as childhood immunization or treatment of malaria, tuberculosis, or HIV, with the potential to reduce maternal deaths by 75%.

Improved health status through better detection and management of chronic disease

74. **Primary care is well-placed to detect and manage NCDs**. The economic importance of this is illustrated by the 2013 STEPS survey. The survey, which combines information on individual risk factors (such as blood pressure, cholesterol or smoking status) or history of CVD or diabetes, suggests that almost 1 in 5 Kyrgyz adults aged 40–64 years have a probability of 30% or higher of having a fatal or nonfatal cardiovascular event such as a stroke or a heart attack within 10 years.

75. **Stronger primary care is critical to meeting this challenge**. The *Public Health Interventions Cost-effectiveness Database*, hosted by the National Institute for Health and Clinical Excellence in the United Kingdom (<http://www.crd.york.ac.uk/CMS2Web/>), finds that many primary care interventions are highly cost-effective in tackling risk factors such as overweight/obesity, lack of physical activity, or smoking.

²⁴ Sandall J, Soltani H, Gates S, Shennan A, Devane D (2016). Midwife-led continuity models versus other models of care for childbearing women. Cochrane Database of Systematic Reviews, Issue 4. Art. No.: CD004667.

²⁵ Fernandez Turienzo C, Sandall J, Peacock JL (2016). Models of antenatal care to reduce and prevent preterm birth: a systematic review and meta-analysis BMJ Open 2016;6:e009044.

²⁶ Carvalho N et al (2013), National and sub-national analysis of the health benefits and cost-effectiveness of strategies to reduce maternal mortality in Afghanistan. Health Policy and Planning; Erim D et al (2012), Assessing health and economic outcomes of interventions to reduce pregnancy-related mortality in Nigeria. BMC Public Health2012; Hu D et al (2007). The Costs, Benefits, and Cost-Effectiveness of Interventions to Reduce Maternal Morbidity and Mortality in Mexico; Goldie S et al (2010); Alternative strategies to reduce maternal mortality in India: a cost-effectiveness analysis.

76. **More detailed estimations, specific to the Kyrgyz Republic**, of the cost-effectiveness of interventions to manage or prevent heart attack, stroke or congestive heart failure in both primary and secondary care²⁷ found that most cost-effective interventions were:

- (i) educating people about the benefits of quitting smoking and reducing blood cholesterol level and daily salt intake through mass-media campaigns
- (ii) providing appropriate hypertension-lowering drug treatment to individuals whose systolic blood pressure is over 160
- (iii) providing aspirin during the acute phase of AMI
- (iv) providing beta blockers, aspirin, and angiotensin-converting enzyme inhibitors during the post-acute phase of AMI
- (v) providing aspirin during the post-acute phase of ischaemic stroke
- (vi) providing diuretics for congestive heart failure
- (vii) providing cardiac rehabilitation for all three conditions.

77. **Those in bold directly reflect the PforR's activities** to improve the prevention, early detection, and management of NCDs in primary care, demonstrating the project's relevance.

Cost-benefit analysis

78. **This section compares the economic costs and benefits** of the PforR and estimates whether it is a worthwhile investment for the Bank and the GoKR.

79. **It is not possible to quantify all economic benefits potentially generated by the PforR.** The economic analysis, therefore, focuses on two areas:

- (i) efficiency gains from shifting care for NCDs from hospitals to primary care
- (ii) health gains from better prevention or management of conditions within primary care

80. **These two analyses are then combined to give a single net present value (NPV) of the proposed PforR investment.**

81. **The analyses use quantitative information obtained from an extensive literature review.** It also relies on several assumptions, in line with previous economic analyses conducted for World Bank projects in the health sector. The cost-benefits were calculated for a 15-year period (2019-2033) using three scenarios (default, lower impact, and higher impact). Financial costs (Program costs) and financial savings (from Program interventions) were discounted at 8% to account for future inflation (around 5% according to IMF projections) and the time value of money (set at 3%).

82. **The costs of the PforR are considered investment costs and inclusive of both IDA funding and Joint Financiers' funding** (US\$37.0 million) plus counterpart GoKR investment (estimated at US\$371.0

²⁷ Akkazieva B, Chisholm D, Akunov N, Jakab M (2009). The health effects and costs of the interventions to control cardiovascular diseases in Kyrgyzstan: policy research paper no. 60. Bishkek: Health Policy Analysis Center.

million). IDA and Joint Financiers' funding is assumed to be distributed in the tranches specified in Annex 2 as if all DLIs were achieved as specified over the five years of the PforR. For the purpose of the cost-benefit analysis, costs are split 50:50 between arms A and B.

83. **For the cost-benefit analysis of the efficiency gains realized by shifting care out of hospitals into a strengthened primary care sector, spending figures on the delivery of hospital services** (8999.1mn som; 50.8% total public expenditure on health) and on the delivery of primary care (4887.1mn som; 27.6% total public expenditure on health) were taken from Figure 5 “*Program-based budgets for the health sector*” earlier in the PAD. It was assumed that total public expenditure on health will increase by 3% a year (the projected growth, 2018-2021). Against this background, it was assumed that the share directed towards hospitals will steadily fall to 45.9% under the default scenario by the end of the PforR, and to 35.6% by 2033, and that the share directed towards primary care will steadily increase to 29.9% under the default scenario by the end of the PforR, and to 36.4% by 2033. These trajectories align with those seen in OECD health systems.

84. **For the cost-benefit analysis of the gain in health status through strengthened primary care**, the monetary value of health gains is calculated based on the potential reductions in disability-adjusted life years (DALYs) of conditions amenable to primary care (such as maternity care, non-communicable disease, vaccine-preventable diseases, as well as some others such as TB, respiratory, skin and gastrointestinal infection). DALYs for the Kyrgyz Republic were obtained from the Institute for Health Metrics and Evaluation Global Burden of Disease Study for 2016 and were projected until 2033 based on historical trends. The maximum reduction in DALYs attributable to the strengthening of the primary care services was set at 2.5%. In the default and low scenarios, each DALY was valued at GDP per capita (\$1,254 in 2018). In the higher impact scenario, we assigned each DALY a value of three times per capita GDP as commonly used in the literature on cost-benefit analysis (Disease Control Priorities; Copenhagen Consensus). The monetary value of the future stream of health benefits (annual DALYs averted) is discounted at 3% based on the recommendations outlined by the WHO and the Disease Control Priorities Project. In the low scenario, the discount rate is set at 5%.

Table 11. Key inputs and assumptions used for the cost-benefit analysis

Key Inputs	DEFAULT SCENARIO	Sensitivity Analysis	
		Low scenario	High Scenario
Monetary value of DALY	1 x GDP per capita	1 x GDP per capita	3 x GDP per capita
Discount rate of the monetary value of future health benefits	3%	5%	3%
Basic discount rate	8% (5% inflation; 3% time-value of money)	8%	8%
Annual decrease in hospital spending:	2.5%	2%	2%
Annual increase in primary care spending:	2%	1.5%	3%
Reduction in DALYs related to primary care	Up to 2.5%	Up to 2%	Up to 3%

Results

85. **Cost-benefit analysis of the efficiency gains realized by shifting care out of hospitals into a strengthened primary care sector finds** that, under the default scenario, the benefit-cost ratio (BCR) is 2.46, with a net present value (NPV) of \$67.28 million. Cost-benefit analysis of the gain in health status through strengthened primary care finds that, under the default scenario, BCR is 1.47 with an NPV of \$149.17 million.

86. **Combining the two analyses, NPV of the PforR as a whole is estimated to be \$216.4 million.** The combined benefit-cost ratio for the PforR is estimated to be 1.97 and the internal rate of return 4%.

Table 12. The economic benefit of the Program

		Default Scenario	Lower impact Scenario	Higher impact Scenario
Combined gain in efficiency and in health status	Benefit-cost ratio (BCR)	1.97	1.76	2.59
	Internal rate of return (IRR)	4%	1.5%	8%
	Net present value (NPV)	\$ 216,449,000	\$ 135,570,000	\$ 369,447,000