



Assessment of sexual, reproductive, maternal, newborn, child and adolescent health in the context of universal health coverage in Kyrgyzstan





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Abstract

Achieving universal health coverage (UHC) – meaning that everyone, everywhere can access essential high-quality health services without facing financial hardship – is a key target of the Sustainable Development Goals. Sexual, reproductive, maternal, newborn child and adolescent health (SRMNCAH) is at the core of the UHC agenda and is among the 16 essential health services that WHO uses as indicators of the level and equity of coverage in countries. In this context, WHO undertook an assessment of SRMNCAH in Kyrgyzstan. This report examines which SRMNCAH services are included in policies concerning UHC in the specific country context; assesses the extent to which the services are available to the people for whom they are intended, and at what cost; identifies potential health system barriers to the provision of SRMNCAH services, using a tracer methodology and equity lens; and identifies priority areas for action. A set of policy recommendations provides the basis for policy changes and implementation arrangements for better SRMNCAH services and outcomes in the context of UHC.

Keywords

SEXUAL AND REPRODUCTIVE HEALTH MATERNAL AND NEWBORN HEALTH CHILD AND ADOLESCENT HEALTH UNIVERSAL HEALTH COVERAGE HEALTH CARE SYSTEM QUALITY OF HEALTH CARE DETERMINANTS OF HEALTH KYRGYZSTAN

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Abbreviations

ADP	Additional Drug Programme
BCG	bacille Calmette–Guerin [vaccine]
C-section	caesarean section
DTP	diphtheria-tetanus-pertussis [vaccine]
GDP	gross domestic product
HPV	human papillomavirus
IMCI	Integrated management of childhood illnesses [WHO strategy]
IUD	intrauterine device
MHIF	Mandatory Health Insurance Fund
MICS	Multiple Indicator Cluster Survey
MMR	measles, mumps and rubella
NSC	National Statistical Committee
OOP	out-of-pocket [expenditure]
РРР	purchasing power parity
SGBP	State-guaranteed Benefits Package
SRMNCAH	sexual, reproductive, maternal, newborn, child and adolescent health
STI	sexually transmitted infection
ТВ	tuberculosis
UHC	universal health coverage
UNICEF	United Nations Children's Fund

Executive summary

An assessment of sexual, reproductive, maternal, newborn, child and adolescent health (SRMNCAH) in the context of universal health coverage (UHC) was conducted in Kyrgyzstan on 19–24 November 2018. It included a review of national documents and policies; interviews with stakeholders, policy-makers and health care professionals; and visits to health facilities in urban and rural parts of the country. The primary goal was to establish which SRMNCAH services are included in policies on UHC, to what extent they are available to the people for whom they are intended and at what cost.

Six SRMNCAH "tracer" interventions – antenatal care (specifically including management of pre-eclampsia); prevention, diagnosis and treatment of sexually transmitted infections; organization of neonatal transport; treatment of common childhood conditions (specifically management of cough and pneumonia); adolescent sexual and reproductive health services; and immunizations – were assessed to identify potential barriers to SRMNCAH service access. Achievements and barriers in these spheres were evaluated in the context of the essential components of UHC.

The assessment found that Kyrgyzstan has given high priority to the health of mothers, infants, children and adolescents by adopting multiple national strategies for their health protection. This is evident through the government's health coverage of specific groups, such as pregnant women and children, as well as multiple national protocols for the care of these groups. However, analysis of several tracers revealed significant deficits; for example, lack of provision of adolescent-friendly sexual and reproductive health services, problems with efficient neonatal transport and suboptimal quality of care in the treatment of common childhood conditions and antenatal care – particularly overtreatment and overhospitalization.

The assessment also found a high proportion of out-of-pocket expenditure, high costs of drugs and a high frequency of informal payments for care as important barriers to achieving UHC goals. Almost a quarter of the population is not covered by the mandatory health insurance benefits package. This includes adolescents, who are no longer considered children but are not yet employed and thus able to contribute to mandatory health insurance. A lack of health insurance funds further results in a significant financial gap, leading to insufficient funding of the State-guaranteed Benefit Package.

Other barriers to the provision of high-quality care are also in place, including low salaries of health care professionals, incentives for non-evidence-based and/or unnecessary care and insufficient financing mechanisms for primary health care. This report provides a summary of the SRMNCAH services in Kyrgyzstan and offers recommendations to improve the current state of health care delivery for infants, children, adolescents and mothers.

Introduction

Universal health coverage (UHC) means that all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship. This definition of UHC embodies three related objectives:

- equity in access, meaning that everyone who needs health services should get them, not only those who can pay for them;
- health services of good enough quality to improve the health of those receiving services; and
- protection against financial risk, ensuring that the cost of using services does not put people at risk of financial harm.

Achieving UHC is one of the targets the nations of the world set when adopting the Sustainable Development Goals in 2015.

Sexual, reproductive, maternal, newborn, child and adolescent health (SRMNCAH) is at the core of the UHC agenda and is among the 16 essential health services in four categories that WHO uses as indicators of the level and equity of coverage in countries. Essential SRMNCAH services used as indicators for UHC are:

- family planning
- antenatal and delivery care
- full child immunization
- health-seeking behaviour for pneumonia.

An assessment of SRMNCAH in the context of UHC was conducted in Kyrgyzstan on 19–24 November 2018. Its specific objectives were to:

- delineate which SRMNCAH services are included in policies concerning UHC in a specific country context;
- assess the extent to which they are available to the people for whom they are intended and at what cost;
- identify potential health system barriers to the provision of SRMNCAH services by using a tracer methodology and an equity lens;
- highlight good practices and innovations in the health system, with evidence of their impact on SRMNCAH services;
- identify priority areas for action and develop policy recommendations jointly with the country to address health system barriers to the provision of SRMNCAH services.

The assessment was carried out on behalf of the WHO Regional Office for Europe and it is intended that similar assessments will be conducted in other countries in the WHO European Region.

Methodology

A methodological approach was developed prior to the assessment and underwent several revisions. This was the second such visit, the first taking place in the Republic of Moldova in September 2018. The steps in the assessment included:

- a preliminary document review, including health policy and strategy documents, sexual and reproductive health and child and adolescent health strategy documents, UHC guiding documents, service package descriptions and similar;
- a country visit, including:
 - interviews with policy-makers from the Ministry of Health, health facility managers (primary health care and hospital), service providers (doctors, nurses and others) and beneficiaries (patients and clients);
 - visits to health care facilities at primary, secondary and tertiary levels;
- a presentation and discussion of findings and recommendations with key stakeholders at the end of the visit.

Semi-structured questionnaires were developed to conduct interviews with key informants, including:

- representatives of the Ministry of Health;
- health facility managers (hospital and primary health care);
- health workers including nurses, doctors and midwives, where applicable;
- patients and clients, including adolescents;
- partners and stakeholders, including representatives of the United Nations Children's Fund (UNICEF) and United Nations Population Fund.

Tracer interventions

Since the amount of resources and time available for the assessment were limited, six tracer interventions were identified and analysed in depth to assess the extent to which services are available to the people for whom they are intended and at what cost. These were:

- antenatal care
- sexually transmitted infections (STIs) (excluding HIV)
- transport of sick neonates
- case management of common childhood conditions
- adolescent-friendly health services (sexual and reproductive health)
- immunization.

The findings are analysed and reported according to WHO's six building blocks of UHC (Fig. 1).

Fig. 1. The building blocks of UHC



Source: Universal health coverage [website]. Geneva: World Health Organization; 2019 (http://www.who.int/universal_health_coverage/en/, accessed 23 April 2019).

Limitations

The methodology aims to triangulate information through document reviews, visits to health facilities and interviews with policy-makers, health managers, providers and clients. The depth of the assessment depends on the completeness of documents provided by the Ministry of Health and partners, as well as the extent to which the health facilities visited and key informants interviewed are representative and reflect the national context and situation. The appraisal of tracer interventions and health system barriers and challenges represents the judgement of the assessment team, based on the information obtained.

Country context

Kyrgyzstan is a sovereign state in central Asia, with a population of 6 256 730.¹ It is a landlocked, lower-middleincome country, which gained independence from the Soviet Union in 1991. The life expectancy at birth for males is 68 years and for females is 75 years.² Since its independence, Kyrgyzstan has undergone several health reforms, including the Manas (1996–2006), Manas Taalimi (2006–2010) and, most recently, Den Sooluk (2012– 2018) programmes. The reforms focused on restructuring hospital care, developing primary health care, introducing financial reforms and reducing the financial burden of health care for patients. Socioeconomic and macroeconomic indicators and health expenditure figures are set out in Table 1.

¹ National Statistical Committee of the Kyrgyz Republic [website]. Bishkek: National Statistical Committee of the Kyrgyz Republic; 2018 (http://stat. kg/en/, accessed 9 November 2018).

² Kyrgyzstan. In: World Health Organization [website]. Geneva: World Health Organization; 2018 (www.who.int/countries/kgz/en/, accessed 9 November 2018).

Socioeconomic indicators	Value	Year	Source
Population, total	6 256 730	2018	National Statistical Committee (NSC)
Population growth (annual)	1.9%	2018	World Bank
Population ages 0–14 years (proportion of total)	32.3%	2018	World Bank
Life expectancy at birth, total (years)	71	2017	World Bank
Inflation, consumer prices (annual)	3.2%	2017	World Bank
Poverty headcount ratio (proportion of population living below the national poverty line)	25.6%	2017	World Bank
Unemployment, total (proportion of total labour force, modelled International Labour Organization Estimate)	7.2%	2018	World Bank
Macroeconomic indicators			
Gross domestic product (GDP) per capita (current US\$)	1281.4	2018	World Bank
GDP per capita growth (annual)	1.6%	2018	World Bank
GINI index (World Bank estimate)	27.3	2017	World Bank
Revenue, excluding grants (proportion of GDP)	28%	2017	World Bank
Gross national income per capita growth (annual)	3.7%	2018	World Bank
Gross national income per capita, Atlas method (current US\$)	1220	2018	World Bank
Health expenditure			
Public health expenditure as a proportion of GDP	3.6%	2014	WHO
Health expenditure per capita (international \$, reflecting purchasing power parity)	240.23	2016	World Bank
Public health expenditure as a proportion of total state budget	11.9%	2014	WHO

Table 1. Socioeconomic and macroeconomic indicators and health expenditure in Kyrgyzstan

Sources: Total population by nationality [website]. Bishkek: National Statistical Committee of the Kyrgyz Republic; 2018 (http://stat.kg/en/ opendata/category/312/); Indicators. In: The World Bank: data [website]. Washington DC: World Bank Group; 2018 (https://data.worldbank.org/ indicator); WHO European Health Information Gateway [website]. Copenhagen: WHO Regional Office for Europe; 2014 (https://gateway.euro. who.int/en/), all accessed 10 October 2019.

Service coverage within UHC is measured globally with an index of 16 tracer indicators, four of which relate to SRMNCAH (Table 2).

Table 2. Health coverage in the context of UHC

Tracer indicator	Value	Year	Source
Family planning			
Proportion of contraceptive demand satisfied by modern methods among women aged 15–49 years who are married or in a union	33.7%	2012	Kyrgyzstan Demographic and Health Survey
Proportion of need for family planning satisfied among married women	39.4% (24.1% for planning conception; 15.3% for prevention of unintended pregnancies)	2018	Multiple Indicator Cluster Survey (MICS)
Proportion of married women aged 15–49 years with unmet needs for family planning	19%	2018	MICS
Antenatal and delivery care			
Proportion of antenatal care performed with four or more visits	94.6%	2014	MICS
Proportion of women who experienced at least four antenatal care visits	94.3%	2018	MICS
Full childhood immunization			
Proportion of 1-year-old children who have received three doses of diphtheria-tetanus-pertussis vaccine (DTP)	786.4%	2018	MICS
Health care-seeking for pneumonia			
Proportion of children under 5 years with acute respiratory symptoms in the last two weeks for whom medical advice or treatment was sought	57.5%	2018	MICS

Table 3 sets out some key indicators on SRMNCAH in Kyrgyzstan.

Table 3. SRMNCAH indicators

Indicator	Value	Year	Source
Maternal mortality ratio, estimated	76/100 000 live births 28.6/100 000 live births	2015 2018	WHO health for all database NSC
Under-5 mortality rate	20/1000 live births 18.5/1000 live births	2018 2017	MICS NSC

Table 3. (contd)

Indicator	Value	Year	Source
Neonatal mortality rate	13/1000 live births 11.8 /1000 live births	2018 2017	MICS NSC
	10.7/1000 live births	2017	WHO
Adolescent birth rate (number of births to women aged 15–19 years during the three-year period preceding the survey, divided by the average number of women of that age during the period)	50/1000 women	2018	MICS
Proportion of children aged 24–35 months who received vaccinations recommended by the national immunization schedule by their first birthday	75.3%	2018	MICS

Health system governance for SRMNCAH

The State-guaranteed Benefits Package and Mandatory Health Insurance Fund

Kyrgyzstan has introduced the State-guaranteed Benefits Package (SGBP), which guarantees basic health care entitlements, formalizes co-payments for specific services and tests, and defines criteria for exemption. These criteria currently cover 16 medical categories, including HIV, tuberculosis (TB) and maternal care, and 30 socially vulnerable groups, including children under the age of 6 years, elderly people aged over 70 years, households with social entitlements and recipients of state benefits.

According to the Mandatory Health Insurance Fund (MHIF), 74% of the population is currently covered by mandatory health insurance. Policy states that access to emergency and primary health care is universal, regardless of insurance status, and so are services connected to key public health issues such as HIV infection and AIDS, TB and immunization, which are financed through donor-supported national programmes. For all people in formal employment, a contribution of 2% of salary, matched by 2% insurance contributions from employers is mandated. This contribution is relatively small, both in absolute and relative terms, but key informants asserted that people are unwilling to pay a higher contribution, as they do not feel that they receive appropriate services for it and are reportedly still required to pay out of pocket both formally and informally for their health care needs. Increased transparency to ensure that the population is aware of entitlements, alongside mechanisms to ensure that entitlements can be accessed, are required.

The MHIF reportedly has no authority to create (or discontinue) contracts with providers. The fund is obligated by contract to pay for all public facilities. For 1012 Kyrgyz som/US\$ 14.50 per month or 12 000 Kyrgyz som/ US\$ 172 per year, uninsured people outside formal employment can reportedly join the insurance fund at any point (even after the onset of illness, although it takes 14 days to issue an insurance card after application), which undermines the attempt to pool risk. It could also lead to adverse selection, through which an individual's demand for insurance is positively correlated with their risk of loss, meaning that people only get insurance once they get sick.

Extensive hospital and primary health care network, dilapidated facilities with significant costs for functioning and maintenance

An important purpose of the health reforms was shifting the focus from hospital care to outpatient care, and especially to primary health services. Family medicine centres were created, and family physician groups established. Many hospitals were also restructured. However, the network of hospitals still seems large and difficult to maintain, with many dilapidated facilities. Overhospitalization and overtreatment continue to be of concern, particularly for children, and require further action. The population seems to perceive the services provided in primary health care as poor and to prefer specialist services and services provided in hospitals.

Relatively low spending on health with high out-of-pocket (OOP) expenditure and informal payments

Total health expenditure expressed in international dollars at purchasing power parity (PPP\$) in Kyrgyzstan is very low compared to other countries in the WHO European Region (Fig. 2).



Fig. 2. Total health expenditure per capita, Kyrgyzstan and WHO European Region

Source: Total health expenditure, PPP\$ per capita, WHO estimates. In: WHO European Health for All database (HFA-DB) [website]. Copenhagen: WHO Regional Office for Europe; 2019 (https://gateway.euro.who.int/en/indicators/hfa_569-6720-total-health-expenditure-ppp-per-capita-who-estimates/, accessed 1 October 2019).

Total health expenditure in relative and absolute terms is very low, and the mortality rate among children aged under 5 years is relatively high compared to other countries (Fig. 3).

The Reproductive Rights Law states that adolescents can make health decisions, including those concerning contraception and abortion, from the age of 16 years, but the Child Protection Law restricts autonomous decision-making of adolescents until the age of 18 years. This leads to ambiguity among both patients and health care professionals, resulting in increased health vulnerability for this age group.





Note: Bubble size relates to public sector health expenditure in international dollars (PPP). *Source:* WHO European Health for All database (HFA-DB). Geneva: World Health Organization; 2019 (https://gateway.euro.who.int/en/datasets/ european-health-for-all-database/#health-care-utilization-and-expenditure, accessed 1 October 2019).

Health system financing for SRMNCAH

The Kyrgyz health care system has experienced a sharp decline in financing since the country's independence in 1991. The actual level of GDP and government revenues declined by half in the mid-1990s, then gradually started a recovery process. However, economic growth is still fluctuating, sometimes with negative growth, and this affects government investment in health (Fig. 4).

The situation is further complicated by the "Semashko" model of health care inherited from the Soviet Union, which is characterized by centralized services and excessive infrastructure, basing provision of care mainly in hospitals.

After independence, the Kyrgyz health system faced two major problems with health care financing: a decline in government spending and an increase in the cost of goods and services (including medicines and electricity), which was necessary to ensure the functionality of health facilities. Thus, the health system was forced to function with less money but increased costs. As in all countries in transition, this resulted in a shortage of medicines, accumulation of debt and the growth of informal payments for health care services.

Fig. 4. GDP growth (annual proportion) in Kyrgyzstan



Source: World Bank Development Indicators database. Washington DC: World Bank Group; 2019 (https://databank.worldbank.org/source/world-development-indicators/preview/on, accessed 1 October 2019).

To tackle the situation in the health care sector and ensure population access to services and financial protection, the Kyrgyz government approved and implemented three strategic reform programmes: Manas (1996–2005), Manas Taalimi (2006–2011) and Den Sooluk (2012–2018). The government also started to increase the funding available to the health sector (Fig. 5).



Fig. 5. Health expenditure (as a proportion of GDP) in Kyrgyzstan

Source: World Bank Development Indicators database. Washington DC: World Bank Group; 2019 (https://databank.worldbank.org/source/world-development-indicators/preview/on, accessed 1 October 2019).

One of the major achievements of these reforms was a change in the financing system: the separation of service delivery and procurement of services and the introduction of a single payer. The Ministry of Health is now responsible for service provision, while the MHIF is responsible for procurement of services within the remit of the government. While progress has been made in financial protection, access to and efficiency of health services, improvements in the quality of health care and achieving substantially improved population health status have been less impressive.

The Den Sooluk programme focused on improving the quality of services and health outcomes of the population in four programmatic areas:

- cardiovascular diseases
- maternal and child health
- TB
- HIV/AIDS.

The government's programme on health protection, population and health system development 2019–2030 is the fourth strategic programme outlining the directions and priorities for health system development. Its priority areas are:

- public health
- primary health care development
- improvement and optimization of the hospital system
- development of emergency medical care
- development of laboratory services
- increased medicines and medical supplies
- strategic management of the health sector
- human resource development
- eHealth development
- health care financing.

Mandatory health insurance

The introduction of the single payer system in health care financing – the MHIF – facilitated the creation of a new financial and organizational structure, aiming at more efficient and equitable use of funds. By accumulating budgetary funds for health care at the national level, even and equitable distribution of funds among health care institutions has been achieved, regardless of the economic condition of the district or city.

Strengths

The introduction of mandatory health insurance at the end of the 1990s, when health care expenditure dropped from 3.7% of GDP in 1991 to 1.9% in 1999, allowed health care institutions to be partly supported and prevented a dramatic drop in their financing.

Currently, two programmes define the entitlements of the population to health services: the SGBP, instituted by Government Decree No. 790 of 20 November 2015, and the Additional Drug Programme (ADP), instituted by Government Decree No. 28 of 12 January 2012, for ambulatory patients. Both are funded through a mixture of payroll (mandatory health insurance) contributions and general taxes pooled by the MHIF. The SGBP defines services that are covered and provided free of charge or requiring a co-payment.

The interviews with key informants indicated that there is no coherent and transparent process for defining the SGBP: for deciding what services are to be made available, to whom and under what conditions, or for establishing functions needed to develop and implement the health benefits package. The list of services was revised annually until 2018. Following this, it will be reviewed during the process of state budget development and changed only when needed. The Ministry of Health and the MHIF will negotiate changes according to government decisions.

The ADP defines a list of medicines for those who pay mandatory health insurance contributions, as well as households with social entitlements and recipients of state benefits. Medicines covered for all include treatment for five diseases: epilepsy, bronchial asthma, paranoid schizophrenia, affective disorders and cancer.

Employers and employees pay mandatory contributions as a percentage of salaries, while farmers and selfemployed people are supposed to pay their mandatory health insurance contributions themselves. The government pays, among others, for pregnant women and children under 5 years.

There are three beneficiary groups of the SGBP and ADP programmes, and they are not mutually exclusive (Fig. 6).





Sources: based on Jakab M, Akkazieva B, Habicht J. Can people afford to pay for health care? New evidence on financial protection in Kyrgyzstan. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/en/countries/kyrgyzstan/publications/can-people-afford-to-pay-for-health-care-new-evidence-on-financial-protection-in-kyrgyzstan-2018), accessed 27 September 2019).

The ADP includes 76 medicines and three medical devices, and medicines can be procured at reduced prices in contracted pharmacies within the scheme.

For SRMNCAH, the SGBP identifies pregnant women, women during delivery, women with pregnancy-related and/or delivery complications and children under 5 years as beneficiaries who are entitled to receive hospital care entirely free of charge, without co-payments (Table 4). All other insured citizens have to co-pay 50%; this includes services for sexual and reproductive health. Since 2015, the MHIF has provided insurance for pregnant women to ensure that those who are uninsured (the majority of whom are from vulnerable groups) have better access to high-quality subsidized medicines. However, according to the MICS of 2018, 77% of women are not aware of the policy and do not know how to register to receive the benefits.

Benefits of mandatory health insurance	Primary health care	Specialized ambulatory care	Hospital
Antenatal care following recommendations	Six visits	Three visits	Yes
Micronutrient supplements	Yes	No	No
Vaginal delivery/caesarean section	No	No	Yes
Postpartum care	Yes	No	Yes
Home visits for postpartum/ postnatal care	Yes	No	No
Family planning ^a	Consultations, pills, injectables	Consultations, pills, injectables, intrauterine device (IUD) insertion	Consultations, pills, IUD insertion – only for women after pregnancy
Emergency contraception	No	No	No
Abortion ^b	No	No	Yes (for medical and social reasons)
STI diagnosis	Smear collection for STI testing Syphilis screening of pregnant women on first visit (at 12 weeks) and fifth visit (at 29–30 weeks) during antenatal care is only free in primary health care under the SGBP	Yes ^c	Yes ^c
STI treatment	No: diagnosis is free, but treatment is paid	Yes ^d with co-payment for insured people	Yes ^d with co-payment for insured people
Human papillomavirus (HPV) immunization	No	No	No
Cervical cancer screening	No	No	No
Cervical cancer treatment	No	No	No

Table 4. SRMNCAH benefits to be provided according to the SGBP

Table 4. (contd)

Benefits of mandatory health insurance	Primary health care	Specialized ambulatory care	Hospital
Vaccination by type:			
DTP	Yes	NA	NA
Measles, mumps and rubella (MMR)	Yes	NA	NA
Pneumococcal conjugate vaccine	Yes	NA	NA
Polio	Yes	NA	NA
Rotavirus	No	NA	NA
HPV	No	NA	NA
Hepatitis B		NA	Yes
Bacille Calmette-Guerin (BCG)		NA	Yes
Treatment for cough for children under 18 years	Only for children under 6 years		
Diagnosis of pneumonia (including X-rays, physical examination, blood tests) for children under 18 years	Only for children under 6 years	Only for children under 6 years	Only for children under 6 years
Treatment of pneumonia for children under 18 years	Only for children under 6 years	Only for children under 6 years	Only for children under 6 years
Access to contraceptives for adolescents, including oral hormonal pills, IUDs, condoms and emergency contraception	No	No	No
Access to abortion for adolescents, including medical abortion and vacuum aspiration	No	No	No

^a During the assessment, only IUDs and injectables were available in some facilities. The list of medicines and medical devices updated in 2018 includes IUDs, as well as Levonorgestrelum + Ethinylestradiolum (rigevidon + triregol). If these are prescribed, they can be obtained for a discounted rate; if others are prescribed, they have to be paid fully. According to the protocol, pregnant women can collect an IUD before delivery and, during the antenatal care visit at 36 weeks, can fill in a form to consent to insertion of IUD after delivery in maternity hospital. These women are advised to have a follow-up visit with primary health care two weeks after IUD insertion.

^b The SGBP lists women admitted for abortion for medical and social reasons as categories of citizens eligible for free access to medical care at primary health care and hospital, but mifepristone and misoprostol are not available free of charge and women must pay for them out of pocket since they are not in the list of medicines eligible for discounted rate or free distribution. For medical abortion, according to the clinical protocol, it can be done at the primary health care level if before 71 days from the first day of menstruation, but only in hospital after 71 days. A vacuum aspirator is not in the list of medical devices covered under the SGBP.

^c Necessary tests are not always available in public facilities, in which case patients are referred to private laboratories.

^d Treatment is 50% covered in the case of prescribing drugs that are included in the ADP for insured people.

Challenges

Funding for the health sector largely depends on the economic situation in the country. According to the National Strategy for Sustainable Development for 2013–2017,³ economic growth was projected at 7% annually; however, actual GDP growth for the last five years was 4.5%. The slowdown in economic growth, in turn, affected state budget revenues and was one of the factors for increasing the budget deficit, which increased to 4.6% of GDP by 2016.

The economy of Kyrgyzstan relies heavily on remittances, and this is expected to continue in the short term. Private inflows support household income and boost domestic demand, but they come with challenges.⁴ High dependence on external factors will influence the government's share of total health expenditure and limit its ability to invest in the health sector (Fig. 7).





Source: World Bank Development Indicators database. Washington DC: World Bank Group; 2019 (https://databank.worldbank.org/source/ world-development-indicators/preview/on, accessed 1 October 2019).

OOP expenditure on health remains a challenge for Kyrgyzstan. The share of OOP payments has decreased since 2003 from almost 58% of total health expenditure to 38% in 2009, but increased again to over 48% in 2015, according to the World Bank (Fig. 8).

³ National Sustainable Development Strategy for Kyrgyzstan, 2013–2017. National Council for Sustainable Development of the Kyrgyz Republic (https://www.greengrowthknowledge.org/national-documents/national-sustainable-development-strategy-kyrgyz-republic, accessed 2 October 2019).

⁴ Dubashov B, Kruse A, Ismailakhunova S. Kyrgyz Republic: a robust recovery with underlying weaknesses: economic update with a particular focus on labor migration (English). Kyrgyz Republic economic update; no. 6. Washington DC: World Bank Group; 2017 (http://documents. worldbank.org/curated/en/727401517229479407/Economic-update-with-a-special-focus-on-labor-migration, accessed 2 October 2019).



Fig. 8. OOP expenditure as a proportion of total health expenditure in Kyrgyzstan

Source: World Bank Development Indicators database. Washington DC: World Bank Group; 2019 (https://databank.worldbank.org/source/ world-development-indicators/preview/on, accessed 1 October 2019).

The primary drivers of the increase in OOP payments seem to be the cost of medicines and medical products, as well as informal payments for services provided (Fig. 9). It appears to be a particular problem in hospitals, where a significant number of informal payments are made to staff as well as for medicines. The proportion of informal payments in total spending on hospital care grew from 26% in 2006 to 35% in 2013, with a declining share of public sources.



Fig. 9. Breakdown of OOP expenditure by type of health care

Source: Jakab M, Akkazieva B, Habicht J. Can people afford to pay for health care? New evidence on financial protection in Kyrgyzstan. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/en/countries/kyrgyzstan/publications/can-people-afford-to-pay-for-health-care-new-evidence-on-financial-protection-in-kyrgyzstan-2018), accessed dd month 2019).

OOP expenditure and informal payments seem to be closing the funding gap between what is supposed to be covered under the SGBP and costs actually incurred by hospitals (including top-ups of extremely low salaries). Inefficiencies in hospital care further aggravate the situation, including an oversupply of hospital beds and facilities, overhospitalization of ambulatory care-sensitive conditions, overuse of medicines and variations in costs for purchasing inpatient medicines.⁵

Several systemic issues affect the ability of the Kyrgyz government to fund the health care system sufficiently. One important factor, with an impact both on the economy as a whole and on the state's ability to collect tax revenue, is the informal economy. According to estimates, in Kyrgyzstan this ranges from 40% to 60% of total economic activity. The impact on available funds for health sector financing is due to both the loss of revenues to the state budget (unpaid tax) and the incomplete coverage with mandatory health insurance of those employed in the informal economy. Overall health insurance coverage is relatively low (74%).

Only one third of the people employed in the economy (including the informal sector and self-employment) are entitled to an employer contribution. This does not seem sufficient to ensure that finance is available for vulnerable categories from the state budget, which is essential to achieving UHC.

Significant progress has been made in improving the financing of the health system, but the efficiency with which available resources are used remains uncertain. The increase in public funding for health is commendable, but available funds are insufficient to finance the SGBP, leading to an estimated gap of 27–39%. This gap is being filled by OOP payments by the population and has a significant impact on the obligations of the state specified in the SGBP. In addition, the continuous increase in categories of citizens receiving services under preferential conditions without additional funding contributes to an increase of the financial gap. A similar situation is observed with the Additional Drug Package, the budget for which is regularly depleted before the end of the fiscal year.⁶

The non-optimized health sector infrastructure leads to inefficiencies in the use of resources, as some health facilities are unable to achieve financial sustainability. According to the MHIF, one third of hospitals are not profitable economically, and their geographical location is not rational.

Currently, there are no financing mechanisms for the provision of preventive services to the population, although providing these is inexpensive and cost-effective. The existing per capita financing mechanism in primary health care requires further modernization so that it carries financial motivation to improve the quality of medical care on an outpatient basis and is results-oriented.

While the health sector was allocated significant additional funds for a salary increase for medical workers in 2010–2011, the existing salary system at its current level cannot serve as necessary financial incentive to secure medical personnel for the regions.

Table 5 sets out a summary of the assessment's findings on health care financing policies.

⁵ Manjieva E, Narmanbetov U, Kadyrova N, Jakab M. Analysis of the medium-term financial sustainability of the State-guaranteed Benefits Package (Policy Research Paper #43). Bishkek: Health Policy Analysis Centre; 2007 (https://www.researchgate.net/publication/236177084_Analysis_of_the_Medium-Term_Financial_Sustainability_of_the_State_Guaranteed_Benefits_Package, accessed 6 October 2019).

⁶ State Programme of Health Sector Development 2030: situation analyses. Bishkek: Ministry of Health; 2018 (http://zdrav2030.med.kg/, accessed 2 October 2019).

Table 5. Summary of findings on health care financing policies

Attribute	Rating	Criteria for rating
Coverage with mandatory health insurance	Some need for improvement	Coverage with mandatory health insurance was estimated at 73.6% in 2017. Policies describing the principles of mandatory health insurance and definitions of vulnerable groups entitled to government-subsidized insurance are well defined, but enforcement is weak, especially for those employed in the informal sector. Sixty per cent of the economy in Kyrgyzstan is informal, and this severely reduces opportunities for mandatory health insurance coverage. Insurance contributions are primarily paid only by and for those formally employed, and this does not provide sufficient funds to cover the SGBP. The SGBP covers SRMNCAH services to some extent, but not all services are fully covered. For example, not all services are provided free of charge, even for insured people: a 50% co-payment is required.
Financial protection	Some need for improvement	Efforts to provide financial protection are better than in some countries with a similar GDP. A trend of decreasing financial protection is observed, mainly because of OOP expenditure on (outpatient) medicines and medical products, as well as informal payments. The incidence of catastrophic OOP payments increased substantially for all except the most deprived population quintile, for whom it did not change between 2009 and 2014. This may be due in part to the sharp fall in the share of households living below the primary needs line, which led to a fall in the percentage of households further impoverished after OOP payments. Pregnant women, women in delivery and children under 5 years are fully covered by the SGBP, but informal payments are widespread. This may undermine attempts to provide financial protection to women and children.
Financing mechanisms for primary health care	Considerable need for improvement	Primary health care is funded based on capitation. This does not provide effective incentives to promote quality of care. According to the WHO Global Health Expenditure database, in 2016, 56% of total health expenditure was spent on primary health care, with a government share of total primary health care expenditure of 31%. It can therefore be assumed that primary health care is not given adequate attention in the allocation of government resources.
Financing mechanisms for hospital care	Considerable need for improvement	Hospitals are reportedly funded according to diagnosis-related groups that are mainly focused on quantity and not quality. The recently introduced results-based funding programme is in the pilot stage. Case-based payments incentivize unnecessary hospitalization and inefficient use of scarce resources for hospital care through the SGBP, triggering informal payments in hospitals.

Essential medicines and medical products for SRMNCAH

Kyrgyzstan's national essential medicine list is reportedly largely in line with the 2015 WHO Model List of Essential Medicines for Children,⁷ but condoms and diaphragms are not included.

Reform processes in the field of drugs supply over the past 20 years and more have led to the presence of a well developed pharmacy network and availability of a wide range of medicines. Changed economic conditions and development of the pharmaceutical market infrastructure have significantly altered its functioning. In the earlier Manas, Manas Taalimi and Den Sooluk health development programmes, however, drugs prices and price reductions were not a priority or focus.

Medicines are mostly purchased without a prescription from doctors. However, the proportion of people who confirmed that they had purchased at least one drug prescribed by a doctor in the last 30 days increased from 6.6% in 2006 to 10% in 2014.

Pricing policies with a focus on reducing costs will be vital for Kyrgyzstan, given the contribution of drugs purchases to OOP payments and the resulting low level of financial protection, including for women and children. Currently, expenditure on pharmaceuticals makes up almost 60% of total OOP expenditure and is even higher for the most deprived population quintile. The financial burden for the population buying medicines has increased for all quintiles (except the highest – the richest group – for which it remains the same), with the lowest income quintiles bearing the highest burden of OOP expenses as a share of household budgets.⁸

It is evident that the population's spending on medicines is growing, due to both higher drug prices and higher consumption. Excessive prescribing by doctors and a lack of information for patients contributes to this trend. Surveys have shown that doctors prescribe drugs by international nonproprietary name (generics) only in cases when the patient cannot afford co-payment for brands and asks for a lower-priced alternative.

Under the ADP, the population is supposed to be able to access selected medicines from contracted pharmacies, with a reimbursement rate set at 50% of the median wholesale price. In reality, this is less than 50% of the retail price because of cost variations, differences in competitive conditions and unregulated mark-up.

The ADP currently includes 76 generic medicines and three medical devices. Selection uses defined criteria based on Ministry of Health priorities, health priorities defined by national programmes, standard treatment protocols and medicines from the national essential medicines list. This list includes some oral contraceptive pills and IUDs, some antibiotics prescribed for the treatment of STIs and some of the drugs required for the management of common childhood diseases.

Drugs to treat cardiovascular diseases and medication for the respiratory system and nervous system account for around 50% of medicines on the ADP list, reflecting the ongoing transition in treatment priorities from communicable to noncommunicable diseases. In some facilities visited, contraceptives (including IUDs and injectables) were not available, although they are supposed to be provided free of charge (at least to women from socially vulnerable groups). Key informants stated that women have to procure contraceptives (including IUDs and injectables) at pharmacies with prescriptions; if they are insured, they are entitled to access them with

⁷ WHO Model Lists of Essential Medicines. In: World Health Organization [website]. Geneva: World Health Organization; 2019 (https://www.who. int/medicines/publications/essentialmedicines/en/, accessed 7 October 2019).

⁸ Jakab M, Akkazieva B, Habicht J. Can people afford to pay for health care? New evidence on financial protection in Kyrgyzstan. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/en/countries/kyrgyzstan/publications/can-people-afford-to-pay-for-health-carenew-evidence-on-financial-protection-in-kyrgyzstan-2018, accessed 24 September 2019).

a 50% co-payment. In 2018, the Ministry of Health allocated 3 million Kyrgyz som/US\$ 42 000 for the procurement of contraceptives for socially vulnerable women, with the intention of increasing this by 1 million Kyrgyz som/US\$ 14 000 each year, but interviewees reported that a very limited number of women have accessed these benefits. While the trend has been improving, more work on transparent information about entitlements seems warranted.

The Health Technologies and Pharmaceuticals Programme at the WHO Regional Office for Europe has actively supported the Kyrgyz health authorities on medicines financing issues. An exhaustive report was published in 2016, analysing the current state of play in the country and recommending the introduction of outpatient medicines price regulation.⁹ Throughout 2017, WHO supported the revision of the entire pharmaceutical legal framework in the country to allow, among others, medicines pricing control.

In 2018, a new law on medicines was approved by parliament and the president and the possibility for price regulation was introduced. An inter-ministerial task force has been appointed and its mission is to design, implement and follow-up on the introduction of outpatient medicines price regulation. The draft regulation has been posted on government webpage and is to be officially consulted with all interested ministries and agencies over the coming months, before its enforcement.

Service delivery and safety of SRMNCAH

Hospital and outpatient facilities are not utilized fully and appropriately. Key informants among staff and patients perceive a lack of trust towards primary health care. Observations in hospitals and clinics revealed disproportionately high utilization of tertiary care facilities for conditions that can be managed in primary care. Parents often take their children directly to hospitals for medical assessments, bypassing primary health care units. This leads to underutilized outpatient clinics with multiple day staff and overhospitalization of conditions that can be managed on an outpatient basis.

The assessment revealed an abundance of health care facilities in both urban and rural areas of Kyrgyzstan. These are often overstaffed, with a very high ratio of staff to patients in both outpatient clinics and hospitals. Health care personnel feel that the workforce is understaffed, but hospital observations revealed only a limited number of inpatients admitted under the clinical lead/responsible physician at any time. Similarly, the acuity of cases observed in an inpatient ward suggest that some patients should be treated as outpatients. One key informant stated that staff workload is still calculated based on the number of beds, on the basis of a methodological instruction about work standards for public health staff from 1981.

The assessment's observations consistently revealed the presence of informal payments for services that should be provided free of charge, ranging from deliveries to in-hospital treatment of common childhood conditions. The presence of informal payments undermines the concept of UHC, and the current method of health system funding does not encourage investment in comprehensive universal primary health care. Many of the key diagnostic tests for SRMNCAH are not available in primary care but require referral to a laboratory; for example, no urine dip sticks are available, and blood for haemoglobin testing needs to be drawn in the laboratory. Vaccination is done at the primary health care level, but only when doctors are available, as nurses and feldshers are not allowed to vaccinate independently. Screening for cervical cancer and STIs is not available in primary care.

⁹ Pharmaceutical pricing and reimbursement reform in Kyrgyzstan. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who. int/en/publications/abstracts/pharmaceutical-pricing-and-reimbursement-reform-in-kyrgyzstan-2016, accessed 2 October 2019).

The highly specialized overall set-up often requires multiple referrals of patients from primary health care to specialist and laboratory services, and providers know where to refer their patients to. Coordination among care providers, including referral back to primary care and/or follow-up after referral, remains challenging, however, as there does not seem to be any formal system or mechanism in place for referring patients back to primary care.

Hospitals do not have emergency departments, and emergency transport does not seem to be organized in a systematic way across the country. Key informants reported that patients rely on informal set-ups in emergencies, such as family or neighbours organizing transport. Even in the case of formalized transport by health staff, payments for fuel are incurred by patients. There is a lack of centralized neonatal transport nationwide. Observations in rural parts of the country revealed that women in labour and/or sick neonates are often transported to tertiary health care facilities by family members or by health care workers from primary health clinics in private vehicles. Both of those scenarios highlight the lack of vital equipment and skills necessary for safe transport of neonates.

The assessment revealed a gap in health care provision for adolescents in both rural and urban areas. The health services provided to adolescents are usually delivered by physicians with a limited knowledge of adolescent-sensitive health topics. Similarly, there is a lack of health facilities dedicated specifically to adolescent visits, creating a barrier in access for these vulnerable groups.

No school curriculum addresses the growth and sexual health of adolescents in schools. Independent teaching is provided by other organizations, such as religious groups promoting abstinence, but the school system has no established method to educate students about normal sexual development, pregnancy risks, STD counselling and other sexual health topics.

Health workforce for SRMNCAH

Low salaries of health workers have led to the need for informal payments and additional income generation. According to data reported by the National Statistical Committee, the gross average salary of a health care and social services worker is 10 566.90 Kyrgyz som (about US\$ 150), while the national gross average salary is 15 994 Kyrgyz som (about US\$ 230). Gross average salaries for other professional categories include the following:

- education worker: 11 599.90 Kyrgyz som (about US\$ 166);
- professional, scientific or technical worker: 19 203.80 Kyrgyz som (about US\$ 275);
- financial or insurance worker: 33 227.10 Kyrgyz som (about US\$ 476).¹⁰

Interviewees confirmed these data and mentioned agricultural activities to complement their income, while patient interviews implied that informal payments are common. Key informants also stated that some doctors work in the public sector in the mornings and in the private sector in the afternoons.

Some patients indicated that family doctors often would refer them to specialists for minor issues, meaning that it could sometimes be easier to go directly to a hospital, where they could get a full investigation and treatment in one place. Thus, the perceived lack of competency of family physicians by patients often leads them to seek

¹⁰ Kyrgyzstan gross average salary: NACE 2: health care and social services [online database]. London: CEIC Data; 2018 (https://www.ceicdata.com/ en/kyrgyzstan/gross-average-salary/gross-average-salary-nace-2-health-care-and-social-services, accessed 2 October 2019).



care in tertiary care centres, leading to underutilization of family medicine offices and subsequent overhospitalization.

Key informants reported that pre-service education is in need of strengthening. One stated that health workers at the Kyrgyz State Medical Institute for Advanced Studies and Retraining are trained in the insertion and removal of IUDs and certified to provide services in the absence of an obstetrician/gynaecologist at the family medicine centre, as one measure to strengthen services.

According to interviewees from national institutions, the government is trying to develop primary health care in the country. Over the past few years, salaries of family doctors have been increased, and a "Deposit for a doctor" programme has been set up for young doctors to encourage them to transfer to around 150 locations, thereby retaining staff in the field. In addition, the number of graduates from medical universities specializing in family medicine has increased from 1–2 graduates to more than 100 each year. Another key informant stated that a further attempt was made to increase availability of health staff in rural areas by sending more than 50% of medical residents to attend postgraduate training in regional clinics.

Health statistics and information systems for SRMNCAH

Kyrgyzstan relies on MICSs for the collection of disaggregated data characterizing life quality of children and the population of reproductive age. Assessment of trends in health service utilization and outcome data for SRMNCAH with a population denominator could not be identified during the assessment visit. The assessment team was unable to find data reported at the subnational level and outcomes for different socioeconomic groups; disaggregation by age and sex was also limited.

Discrepancies between international estimates and national mortality data are stark and should be reviewed. To give one example, clinics do not report of maternal deaths when the woman does not have a Kyrgyz passport.

No data could be found on pre-eclampsia rates.

Four key issues surround the implementation of a uniform health information system:

- a lack of funds for a monitoring and evaluation system;
- a lack of qualified human resources (data analysts) to check the reliability and feasibility of data it is difficult to recruit these professionals because of the low salaries compared to other health system areas;
- a lack of continuous education and training schemes for staff working with data at all levels, central and local;
- a lack of political demand for an integrated information system that would feed into policy- and decisionmaking processes at the strategic and operational levels.

Tracer interventions

Antenatal care (focusing on pre-eclampsia)

Statistics

During the past decade Kyrgyzstan has made significant progress in reducing maternal mortality, but the rate is one of the highest in the WHO European Region, at an estimated 76 deaths per 100 000 live births,¹¹ while according to the National Statistics Committee it was 31.2 per 100 000 live births in 2017.¹² The primary causes of maternal mortality included haemorrhage (18.8% in 2016 and 14.6% in 2017), extragenital diseases (33.3% in 2016 and 39.6%. in 2017), hypertensive disorders (22.9% in 2016 and 10.4% in 2017) and sepsis (22.9% in 2017).¹³

The Kyrgyzstan Demographic and Health Survey of 2012 found that 97% of mothers who had had a live birth in the previous five years reported seeing a health professional at least once for antenatal care for the most recent birth.¹⁴ Almost four fifths (79%) saw a doctor, 4% saw a feldsher and 13% received antenatal care from a nurse or midwife.

The MICS of 2014 found that, among women aged 15–49 years with a live birth in the last two years, during the last pregnancy that led to a live birth: 98.4% were attended at least once by skilled health personnel; 94.6% were attended at least four times by any provider; and 98.2% had their blood pressure measured and gave urine and blood samples. The survey also found that 7.4% of the same cohort had their most recent live birth delivered by caesarean section (C-section). The number of pregnant women registered with an antenatal care clinic prior to the twelfth week of pregnancy increased from 50% in 2011 to over 75% in 2016.

Protocols

A protocol defining standards for antenatal care provision in line with the latest WHO guidelines¹⁵ were approved by a ministerial order in 2018. It includes nine antenatal visits, with recommendations for healthy eating and iron and folic acid supplementation; screening, prevention and treatment of infections including syphilis and HIV; screening for anaemia; and interventions for physiological symptoms. Ultrasound examination is a component of the protocol, with two recommended (at less than 12 weeks and at 20 weeks), plus an additional ultrasound if required before delivery. Women are seen by a feldsher or nurse/midwife at feldsher/midwifery posts in villages and by family doctors at group practices or medicine centres. Feldshers and nurse/midwives have no authorization to prescribe and no means to diagnose pregnancies. Pregnancy tests are available at pharmacies and ultrasound examination can also be accessed in the private sector. Ultrasound examinations carried out in the private sector are reportedly perceived as higher in quality. Representatives from villages reported that women usually come with an ultrasound picture, alerting feldshers to their pregnancies.

Obstetricians/gynaecologists are mainly located in hospitals. 95% of pregnant women are reported to receive antenatal care according to the protocol, but key informants on policy reported that, despite antenatal care coverage, the quality of care is poor. Interviewees reported that an informal system is in place to receive pregnant women at hospitals to cover inadequate care provision in primary health care. One representative of a central provider noted that antenatal care requires strengthening in human and material resources, organization

¹¹ Kyrgyzstan key indicators. In: World Health Organization [website]. Geneva: World Health Organization; 2015. (https://apps.who.int/gho/data/ node.cco.ki-KGZ?lang=en, accessed 9 November 2018).

¹² National Statistical Committee of the Kyrgyz Republic [website]. Bishkek: National Statistical Committee of the Kyrgyz Republic; 2018 (http://stat. kg/en/, accessed 9 November 2018).

¹³ The National Committee on Confidential Enquiries into Maternal Death. Life of mothers of the Kyrgyz Republic: the second report on confidential enquiries into maternal deaths in the Kyrgyz Republic for 2014–2015. Bishkek: Ministry of Health of the Kyrgyz Republic; 2017.

¹⁴ Kyrgyz Republic demographic and health survey, 2012. Bishkek: National Statistical Committee and Ministry of Health; 2012 (https://www. dhsprogram.com/publications/publication-fr283-dhs-final-reports.cfm?cssearch=6611_1, accessed 7 October 2019).

¹⁵ WHO recommendations on antenatal care for a positive pregnancy experience. Geneva: World Health Organization; 2016 (https://www.who. int/reproductivehealth/publications/maternal_perinatal_health/anc-positive-pregnancy-experience/en/, accessed 7 October 2019).

of services, referral and patient satisfaction. Another reported that 70 birth preparedness schools could be used to improve awareness of the benefits of antenatal care.

Protocols and action algorithms for the management of pre-eclampsia and eclampsia are reported to be in place and followed at all levels.

Service delivery

Key informants in primary health care reported that they never saw cases of pre-eclampsia, which – given the general prevalence rates – is not likely. Interviewees from regional hospitals reported that pre-eclampsia was not as common as it was formerly, thanks to the success of the referral pathway; however, this may have an impact on management rather than incidence of (pre-)eclampsia. Central hospital representatives noted that pre-eclampsia was a frequent problem and that women were often referred late and in a serious state.

At the central provider level, interviewees reported monitoring protocol violations and reporting them to the Ministry of Health and the referral facility to improve quality of care; however, it was not clear whether this achieved the desired result. Drugs, including magnesium sulfate and common antihypertensives, were reportedly available and free of charge for inpatients, although the assessment team was not able to confirm this. If stock-outs occur, women are expected to buy drugs from private pharmacies.

Representatives from the regional health insurance fund stated that social insurance cards are issued to women if they register within 12 weeks of pregnancy, although they can also register after 12 weeks. The card remains valid for one year.

An independent national confidential enquiry into maternal deaths found that, of 148 maternal deaths for the period 2014–2015, 106 women died due to pregnancy-related complications during pregnancy, during delivery or in the postnatal period. Eclampsia was the most frequent cause of death among hypertensive causes during pregnancy, and in 50% of cases seizures occurred in hospital.¹⁶ The investigation also found evidence of inadequate medical care in 86 of 148 maternal deaths, as medical personnel failed to detect the severity of the condition, were late to establish a diagnosis or did not provide care according to the protocol.

No urine testing strips were available in any village facilities. When asked how urine is tested, feldshers and nurses at several facilities reported using the boiling method, referring to the urine protein heat coagulation test for detecting proteinuria. Key informants reported that women with pre-eclampsia were advised to arrange their own transport to the referral facility due to significant time delays in ambulances arriving from regional hospitals. At another village facility (a group of family doctors), the doctor reported driving patients with pre-eclampsia or other emergencies to a larger facility in his private vehicle, which took less time than the ambulance. Interviewees stated that the closest hospital was 20 km away and that emergency aid vehicles would not come to this remote area, but that an informal system existed where family and/or neighbours would transport emergency cases.

Patients reported that informal cash payments in hospitals were common practice to gain better care, including for delivery. Key policy informants noted the poor quality of care in hospitals for vaginal deliveries and C-section. One stated that the proportion of C-sections had increased in recent years and that the poor quality was one of causes of maternal mortality. Doctors at state-run and (especially) at private hospitals are reportedly increasingly performing C-section deliveries to avoid complicated situations and emergency duty calls. In 2018, among 160 780 deliveries, nearly 20 000 babies were born by C-section (amounting to 12.5% overall), while in private hospitals the C-section rate reached well over 30%.¹⁷

¹⁶ The National Committee on Confidential Enquiries into Maternal Death. Life of mothers of the Kyrgyz Republic: the second report on confidential enquiries into maternal deaths in the Kyrgyz Republic for 2014–2015. Bishkek: Ministry of Health of the Kyrgyz Republic; 2017.

¹⁷ Kyrgyzstan Multiple Indicator Cluster Survey 2018, Survey Findings Report. Bishkek: National Statistical Committee of the Kyrgyz Republic and UNICEF; 2019 (https://datacatalog.worldbank.org/dataset/kyrgyz-republic-multiple-indicator-cluster-survey-2018, accessed 7 October 2019).

Table 6 sets out a summary of the assessment's findings on antenatal care.

Attribute	Rating	Criteria for rating
Protocols and legislation	Good practice/ little need for improvement	The protocols for antenatal care are in line with WHO recommendations, including nine points of contact with a physician during pregnancy.
Scope of services	Good practice/ little need for improvement	All WHO-recommended antenatal care interventions are included in the protocol.
Population coverage and/or access	Some need for improvement	Pregnant women are covered by insurance in principle, but often pay for services, including delivery care and hospital care for complications. Insurance is valid for 12 months after registration. Nevertheless, most women are not aware of their entitlement to insurance cover.
Quality of services	Some need for improvement	Providers at different levels lack appropriate knowledge and skills for routine care and management of complications.

Table 6	. Summary	of findings	on antenatal	care
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STIs (excluding HIV)

Statistics

Data on STIs made available to the assessment team during the visit showed higher rates for congenital syphilis than for syphilis prevalence, which may indicate a problem with data quality and/or underreporting.

The WHO Global Health Observatory data repository documented 11 cases of congenital syphilis in 2013 and 17 in 2014, and a congenital syphilis rate of 10.9 (2013) and 6.9 (2014) per 100 000 live births.¹⁸

Ministry of Health data from 2017 showed five cases of congenital syphilis and no gonococcal eye infections; they also suggested that prevalence of syphilis and gonorrhoea was reducing, but some key policy informants had concerns regarding the quality of the data.

Table 7 shows syphilis and gonorrhoea rates in Kyrgyzstan.

Table 7. Sybnills (all types) and gonormoea in absolute numbers and per 100 000 populatio	Table 7.	Syphilis (a	all types) and	gonorrhoea in	absolute numbers	and per	100 000 population
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Syphilis (all types)			Gonorrhoea				
Absolute	numbers	Per 10	000 000	Absolute	numbers	Per 10	000 000
2016	2017	2016	2017	2016	2017	2016	2017
495	428	8.1	6.9	462	277	7.6	4.5

Source: Sexually transmitted infections 2016–2017. Bishkek: Ministry of Health; 2018.

¹⁸ Congenital syphilis. In: Global Health Observatory data repository [online database]. Geneva: World Health Organization (http://apps.who.int/gho/data/node.main.CONGENITALSYPHSTI?lang=en, accessed 7 October 2019).

Protocols

Several protocols are available for STI diagnosis and treatment. A number of unpublished protocols were made available to the assessment team during the visit, including guidance covering a syndrome-based approach to treatment of patients with STIs; laboratory diagnostics of syphilis, Chlamydia and gonorrhoea for all levels of health care delivery; and diagnosis and treatment of syphilis, Chlamydia and gonorrhoea for all levels of health care delivery.

Service delivery

According to the SGBP, STI consultations are covered by health insurance. STI testing and drugs for STI treatment are only partly covered for insured outpatients, requiring a 50% co-payment for drugs. Several key policy informants reported a reluctance among health care professionals to discuss STIs. Village doctors stated that STIs are not diagnosed or treated in primary health care, and that patients need to be referred to larger facilities such as family medicine centres or hospitals. One interviewee from a tertiary provider stated that STI problems are hidden and better policies are required to address the problem. Diagnostic laboratories are mandated to inform the Ministry of Health of positive STI results.

There is a lack of laboratory services for STI diagnosis, leading patients to access the private sector. Medications for treatment of gonorrhoea, Chlamydia and syphilis were reported to be available and covered for insured people with a 50% co-payment.

Officially, according to the SGBP, pap smears (collection and analysis) for patients referred from primary health care should be free of charge. Smaller groups of family doctors did not offer pap smears and had to refer to larger centres. Key informants stated that collection is covered but that patients are often required to pay for laboratory analysis. A dermatologist/venereologist was available for STI consultation at some family medicine centres, but some patients are referred to hospitals. Not at all family medicine centres provide STI diagnostics and treatment. Some stated that they never see patients with STI symptoms; others said they would refer those with symptoms for diagnosis and treatment to higher levels. Sometimes patients then come back to primary care to receive the required injections or treatment.

While HIV testing during pregnancy is officially covered by the SGBP, some key informants stated that it is mandatory, and that the cost is 47 Kyrgyz som/US\$ 0.70 plus a fee for the consultation.

Table 8 sets out a summary of the assessment's findings on STIs.

Attribute	Rating	Criteria for rating
Protocols and legislation	Some need for improvement	Protocols are available for management of STIs.
Scope of services	Some need for improvement	Referral for laboratory testing is required in many settings and services are sometimes only offered at private laboratories.

Table 8. Summary of findings on STIs

Table 8. (contd)

Attribute	Rating	Criteria for rating	
Population coverage and/or access	Considerable need for improvement	STI medications for treatment of gonorrhoea, Chlamydia and syphilis were reported to be available and covered for insured people with a 50% co- payment.	
		According to the SGBP, STI consultations are covered by health insurance. STI testing and drugs for STI treatment are only partly covered for insured outpatients, requiring a 50% co-payment for drugs. There is lack of laboratory services and patients have to go to private laboratories for testing.	
Quality of services	Considerable need for improvement	Stigma seems to limit the availability of data and services. Treatment available in primary health care seems to be inconsistent; (self-)referral to specialists and/or hospital seems to be common; and prices incurred by patients are not transparent.	

Neonatal transport

Infrastructure, legislation and monitoring

There are significant geographical challenges to neonatal transport in Kyrgyzstan, with long distances from remote areas, mountains to traverse, difficult road conditions and challenging weather conditions – particularly in winter.

The mechanism for transporting neonates in need of tertiary care from primary or secondary care facilities is based on the SANAVIATION system used in the former Soviet Union: doctors on a roster are on call and are taken by emergency vehicles located at the national emergency hospital in Bishkek to pick up the neonates and accompany them to neonatal intensive care units. Although called SANAVIATION, however, no helicopters or planes are available for transport of emergency cases.

Key informants reported that government regulations define which hospital level should perform which services, and when to refer where for emergency perinatal care. Despite this, there seems to be uncertainty about which patients should be referred and how they can be transferred, with no guidance on neonatal indications for referral.

A national committee carried out a confidential enquiry into maternal deaths in 2014–2015 and found that, of 148 maternal deaths, 13 were due to problems with transportation: only two of these women were brought to hospital by ambulance, while the other 11 presented themselves after journeys taking between 30 minutes and three hours, without any medical assistance on the way. The report described serious fragmentation of the transport system, lack of coordination between levels of care, lack of proper communication between medical staff during transfer, no dispatcher and no knowledge of where the women end up.

A new perinatal centre in Bishkek is planned to be completed by 2020; coordinating transport will be one of its major functions. Its establishment has been supported by donor funding and is expected to be taken over by the National Centre for Maternal and Child Health.

Since 2016 there has been a protocol on resuscitation care for neonates. Results-based financing provides standards for neonatal resuscitation for all providers, infrastructure – including amenities and cleanliness – and neonatal admission checklists. Providers have to achieve these standards to receive bonus payments. It will be

important to monitor carefully whether these bonuses improve quality of care or create a climate of omission and distrust.

Protocols

Integrated management of childhood illnesses (IMCI) – the WHO strategy to reduce under-5 mortality – and the WHO Pocket book of hospital care for children include information on management of neonatal conditions, when to refer and provision of pre-referral treatment.¹⁹ These guidelines are in place and reported to be followed at all levels. A manual of clinical algorithms in neonatology²⁰ is available from the Ministry of Health; it includes neonatal resuscitation, respiratory support, use of surfactant, management of low-birth-weight babies, essential lists of equipment needed in hospitals for newborn and intensive care and intermediate care equipment standards. However, no specific criteria have yet been established for where to refer to, and how to transport neonates.

Service delivery

As much as possible babies are transferred in utero when the mother has pregnancy complications. Two vehicles based in Bishkek can bring women to the central referral hospital. Doctors are on a roster for retrieval of women outside Bishkek, but they may only travel in a standard car or an ambulance equipped for the transport of general patients to assess and provide treatment at the regional facility. Women in preterm labour will be given dexamethasone if less than 34 weeks and antibiotics for pre-labour membrane rupture.

Key informants from tertiary care providers reported that in Bishkek sick neonates can be transported to the National Centre for Maternal and Child Health by a fully equipped neonatal transport ambulance, with a heated transport cot, oxygen and respiratory support equipment, including mechanical ventilation and monitoring facilities. Staff have been trained on the use of equipment in the vehicle, which is based at a transport centre near the maternity and neonatal unit. A neonatologist will retrieve the baby. Surfactant, which was previously provided by UNICEF, is no longer available in the public sector. One interviewee stated that 500 bottles of surfactant in 2015 and 700 bottles in 2017 were transferred by Takeda pharmaceutical company on a charitable basis and distributed to secondary and tertiary organizations, but it is not procured by the state. Patients can buy surfactant at private facilities if available, but prices are prohibitive for most.

Some regional hospitals have their own neonatal transport vehicle. Following a 2016 ministerial decree, Talas regional hospital has a fully equipped ambulance with transport cot, ventilator, ability to give continuous positive airway pressure, oxygen and facility to provide intravenous infusions and monitor the neonate. Staff have been trained to use the equipment and a neonatologist will retrieve a baby of less than 28 days. In 2017, 80 babies were retrieved from the districts to Talas regional hospital and 40 babies referred from the region to Bishkek. Those babies were mostly preterm or had respiratory difficulties, congenital heart disease or other congenital abnormalities.

General surgeons will only operate on neonates in extreme emergencies; those requiring surgery are referred to Bishkek. Talas regional hospital reportedly collects data on transport, including the baby's temperature on arrival (although this could not be verified during the assessment). Families are requested to pay for the fuel for transportation (150 litres for transport to Bishkek) but reportedly the hospital will forego the charge if parents are unable to pay. In Talas, the donated surfactant ran out in October and families cannot afford to purchase it owing to prohibitive cost (35 000 Kyrgyz som/US\$ 500). Establishment of a donor-supported perinatal unit with 30 beds in Talas is reportedly planned for 2019. How these new structures relate to the overall plan of reducing the number of facilities remains unclear, however.

¹⁹ Integrated Management of Childhood Illness: chart booklet. Geneva: World Health Organization; 2014 (https://www.who.int/maternal_child_ adolescent/documents/IMCI_chartbooklet/en/, accessed 7 October 2019); Pocket book of hospital care for children: guidelines for the management of common childhood illnesses, second edition. Geneva: World Health Organization; 2013 (https://www.who.int/maternal_child_adolescent/documents/child_hospital_care/en/, accessed 7 October 2019).

²⁰ A manual of clinical algorithms in neonatology. Bishkek: Ministry of Health, National Centre for Protection of Health of Mothers and Children and Department of Pathology for Newborns and Premature Babies; 2016.

Other sick neonates outside Bishkek may be brought by their parents or by ambulances based in districts or regions, but these vehicles are not equipped for neonatal transport and carry no oxygen. Interviewees reported that babies often arrive at tertiary facilities hypothermic and in overall poor condition. They may be transported with their parents and a nurse or doctor from the emergency department in the district or regional hospital who lacks specific training. Key informants at the district level reported long waiting times for the arrival of neonates via regional hospital transport vehicles: 30 minutes was the shortest wait reported.

Table 9 sets out a summary of the assessment's findings on neonatal transport.

Attribute	Rating	Criteria for rating
Protocols and legislation	Some need for improvement	Clinical protocols for preterm and sick neonates are available. No mechanisms, algorithms, criteria or standard operating procedures for neonatal transport are available. Legislation does not cover neonatal transport.
Scope of services	Considerable need for improvement	No systematic mechanism exists for transport adequate for neonates.
Population coverage and/or access	Considerable need for improvement	Coverage is limited and transport is often organized by patients or informally by providers. Costs are to be covered out of pocket by the patients. Specific neonatal transport vehicle only available in Bishkek, Talas and some other regional hospitals.
Quality of services	Considerable need for improvement	No clear guidance is in place on transport mode from villages. Most staff transporting sick neonates are not trained. Neonates reportedly arrive in poor conditions, such as hypothermic.

Table 9. Summary	of findings	on neonatal	transport
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Case management of common childhood conditions: cough and pneumonia

Statistics

The eHealth Centre of the Ministry of Health reports incidence and prevalence rates for pneumonia in children aged up to 5 years (Table 10).

Table 10. Incidence and prevalence rates per 100 000 children under 1 year and 1–4 years of age, 2018

Category	Children <1 year	Children 1–4 years
Incidence of pneumonia per 100 000	2808.5	1148.0
Prevalence of pneumonia per 100 000	3261.4	1399.3

Source: Health of population and work of health care organizations in the Kyrgyz Republic. Bishkek: eHealth Centre; 2018.

The MICS of 2014 documented that 2.3% of children under the age of 5 years had experienced acute respiratory infection symptoms in the last two weeks. Of these, advice or treatment was sought from a health facility or provider for 59.7%, while 84.7% received antibiotics (indicating self-prescription and access to antibiotics through pharmacies).

Protocols and legislation

Protocols for the management of common childhood conditions in line with the WHO guidelines (IMCI and the Pocket book of hospital care for children) are in place and reported to be followed at all levels. Use of the WHO Pocket book was approved by a ministerial decree in 2013, and the Pocket book is also available as a mobile phone application. IMCI supervision to support quality of care is performed periodically by specialists from the National Centre for Maternal and Child Health. Children are followed up by primary health care after discharge. Children under 5 years are exempt from co-payments; however, parents interviewed on the assessment visit reported that they often have to pay for additional medication.

Service delivery

In hospitals, parent not only pay for medications that should be free of charge according to policy but are also often asked for cash payments by health care providers for the child's inpatient stay to improve the quality of care provided.

Essential antibiotics for pneumonia and inhalers for treatment of wheezing were available at hospitals, with no stock-outs reported. However, key informants reported that antibiotics are available on paper but are dispensed in only about 50% of cases.

Representatives from central and regional hospitals reported that oxygen was usually delivered via oxygen concentrators. Investigations such as basic blood work and chest X-ray were readily available and reportedly free of charge to the patient. Computerized tomography when required was not covered; nor were second-line antibiotics. Children with pneumonia were reported to be admitted to hospital for 5–6 days. Children are usually followed up by primary health care after discharge, and the hospital provides written documentation of ongoing care required.

Diagnosis for TB may be initiated at the hospital level, but children are sent to the regional TB centre for additional testing, including sputum, aspirates and GeneXpert tests. TB services are supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria.

Key informants from tertiary care providers reported that management of pneumonia in children is curtailed due to lack of laboratory diagnostic services, especially for those with chronic pneumonia, suggesting that bacteriological, biochemical and immunological laboratory services were needed. In Bishkek, children may be sent to the Centre for State Sanitary and Epidemiological Surveillance for further diagnosis, reportedly leading to further OOP payments. Interviewees had also requested medications and blood products for pneumonia treatment that are not in line with international standards. No studies have been conducted to investigate microbiological resistance patterns in Kyrgyzstan. It was reported that potent antibiotics for pneumonia frequently have to be prescribed centrally due to resistance to first-and second-line antibiotics because of (over-) use of antibiotics at lower care levels.

Protocols were not always followed, particularly in primary health care. Representatives from villages reported that children with coughs were often prescribed injections. A number of children who appeared well were seen in primary health care for ongoing intramuscular injections, reportedly for respiratory conditions. The prevailing belief observed during the assessment appeared to be that stronger antibiotics were better and expected for a child's treatment. A mother of a 6-year-old boy with a cough and sore throat exiting a primary health care facility had been prescribed antibiotics for intramuscular injection, antipyretics and cough medicine. Through interviews with staff and observation, polypharmacy was also seen in hospitals, with increased OOP payments for unnecessary medications and risk of antibiotic resistance due to their inappropriate use.

The hospitalization rate for children under 5 years with pneumonia is high compared to other countries in the Region (Fig. 10).



Fig. 10. Total hospitalization rates for pneumonia among children under 5 years (per 1000 population aged 0–4)

Source: Situation of child and adolescent health in Europe. Copenhagen: WHO Regional Office for Europe; 2018 (http://www.euro.who.int/en/publications/abstracts/situation-of-child-and-adolescent-health-in-europe-2018, accessed 2 October 2019).

Key informants reported that steps had been taken to reduce unnecessary hospitalization of children who can be safely managed as outpatients, to reduce nosocomial infections and avoid unnecessary distress and disruption of family life and schooling. Results-based incentives for family doctors for assessing and managing a quota of respiratory conditions including pneumonia in primary health care were reportedly put in place to disincentivize unnecessary referral and hospitalization. Despite this, a considerable number of children who could be safely managed at home were seen in hospital during the assessment.

Key informants also reported a preference of parents for hospitalization, noting: "Parents' level of health education is low. They believe it is better for patients to be here."

Table 11 sets out a summary of the assessment's findings on case management of cough/pneumonia.

Attribute	Rating	Criteria for rating	
Protocols and legislation	Good practice/ little need for improvement	IMCI and the WHO Pocket book of hospital care for children are used. Results-based incentives to manage pneumonia in primary health care are in place, with unclear consequences.	
Scope of services	Good practice/ little need for improvement	Resources for management of cough and pneumonia are available.	

Table 11. Summary of findings on case management of cough/pneumonia

Table 11. (contd)

Attribute	Rating	Criteria for rating
Population coverage and/or access	Some need for improvement	Parents incur costs: formally for children over 5 years as they are not covered by health insurance, but informally for younger children as well. Non-evidence- based treatment for cough/pneumonia leads to additional OOP expenditure.
Quality of services	Considerable need for improvement	Polypharmacy and overuse of antibiotics are prevalent. Use of unnecessary invasive treatments (such as intramuscular injections) and hospitalization of cases that could be safely managed as outpatient are both due to health provider practice and parents' expectation. There is therefore a risk of antimicrobial resistance, with detrimental effects on individuals and society.

Immunization

Statistics

Immunization coverage in Kyrgyzstan was reported as 80.4% of children aged 24–35 months who had received vaccinations recommended by the national schedule by their first birthday²¹ and 74.3% of children aged 18–29 months who received all basic vaccinations: BCG, measles or MMR, three doses each of DTP or pentavalent vaccine (DTP + hepatitis B + *Haemophilus influenzae* type b) and polio vaccines (Fig. 11).²²

Differences by sex and birth order are not large, but variations by urban or rural residence and by region are marked. The proportion of children who have received all basic vaccinations is considerably higher in rural (78%) than in urban areas (67%). Basic vaccination coverage shows some tendency to decline as mother's education and wealth quintile increase. In 2016, over 95% of children aged 12–24 months received the third dose of the pentavalent vaccine (WHO).²³

Legislation and national immunization programme

The national immunization schedule is largely in line WHO recommendations. Ministerial decrees include information on vaccine use, how to administer vaccines, contraindications to vaccines, use of syringes and documentation of vaccine use. Pneumococcal vaccine was introduced in 2016, funded by GAVI, the Vaccine Alliance. Rotavirus vaccine introduction has been delayed, reportedly because of a global shortage, and HPV vaccines are currently only available for purchase at private facilities. GAVI support for the introduction of HPV vaccine is included in the multiyear plan for 2019–2022, but had not been approved by the national technical advisory group at the time of the assessment. Interviewees at all levels reported that the immunization programme was effective, with central procurement, supply and vaccine distribution all functional.

Key policy informants reported that immunization may be refused on religious grounds and that the existing immunization policy was being updated to address process issues to increase coverage. A recent measles outbreak was reported among migrant children, as they were not registered and thus missed immunization.

²¹ Kyrgyz Republic Multiple Indicator Cluster Survey, 2014. Final Report. National Statistical Committee of the Kyrgyz Republic, UNICEF, UNFPA ^{(https://www.unicef.org/kyrgyzstan/media/1066/file/Kyrgyzstan_2014_MICS_English.pdf%20.pdf).}

²² Kyrgyz Republic demographic and health survey, 2012. Bishkek: National Statistical Committee and Ministry of Health; 2012 (https://www. dhsprogram.com/publications/publication-fr283-dhs-final-reports.cfm?cssearch=6611_1, accessed 7 October 2019).

²³ Coverage time series for Kyrgyzstan (KGZ). In: WHO vaccine-preventable diseases: monitoring system. 2019 global summary [website]. Geneva: World Health Organization; 2019 (http://apps.who.int/immunization_monitoring/globalsummary/coverages?c=KGZ, accessed 8 October 2019).



Fig. 11. Trends in vaccination coverage among children aged 18–29 months

KgDHS: Kyrgyz Republic Demographic and Health Survey.

Source: Kyrgyz Republic demographic and health survey, 2012. Bishkek: National Statistical Committee and Ministry of Health; 2012 (https://www. dhsprogram.com/publications/publication-fr283-dhs-final-reports.cfm?cssearch=6611_1, accessed 7 October 2019).

Service delivery

Neonates are given hepatitis B vaccine within 24 hours of birth and BCG vaccine before discharge from the hospital. The majority of immunization occurs at the village level, provided by feldshers and nurses but only under the supervision of a doctor. Every week the vaccines are brought from the family medicine centre to the feldshermidwifery posts, maintaining the cold chain. All such posts visited during the assessment visit had vaccine fridges, but some were empty, as at some posts have no attending doctors and thus vaccination cannot be carried out.

Children in the catchment area are reportedly called in for immunization according to the schedule. In order to use a complete vial containing 10 doses at a time and avoid wastage, immunization visits do not take place daily but are scheduled for when 10 children needing the vaccination can attend together. The children always have to be assessed by a physician prior to administration of the vaccine by the nurse, whether in a group of family doctors, at family medicine centres or at feldsher points. After the vaccination, children are observed in the clinic for 30 minutes to monitor for adverse reactions. Immunization is reportedly an important indicator in the results-based financing scheme for providers to receive additional financial bonuses for service.

A review was conducted by the WHO Country Office in Kyrgyzstan and found many contraindications to vaccination that were not evidence based; for example, children with minor viral illnesses were reportedly not vaccinated. This presents a significant missed opportunity. With support from the WHO Regional Office for Europe, training on contraindications was organized, a working group with national experts established and guidelines on contraindication developed.

Nurses are required to carry out home visits the day after a child has been vaccinated (so vaccinations are never carried out on Fridays). This is an unnecessary, non-evidence-based, resource-intensive practice with no benefit for the child. At the time of the assessment vaccinations were not recorded in home-based records, but the WHO Country Office was supporting planning of such records and implementation was expected to start in 2019.

HPV vaccine is only available in the private sector for US\$ 200 per shot. It is reportedly also administered to adults – both women and men.

According to the results of a UNICEF knowledge, attitudes and practices study cited by one key informant, trust in the quality of vaccines is overall good, and the main reasons for refusal are religious. However, key informants reported that some doctors have concerns about the quality and safety of vaccines, and that there is an increasing trend of vaccine hesitancy among well educated, high-income, middle-aged parents.

Dispensarization visits (a comprehensive system of examination and surveillance for all types of illness in the population) are reportedly still taking place, despite the lack of evidence of benefits for children and adolescents.

Table 12 sets out a summary of the assessment's findings on immunization.

Attribute	Rating	Criteria for rating
Protocols and legislation	Some need for improvement	The national immunization schedule is in line with the WHO Expanded Programme on Immunization schedule, although it does not include HPV vaccination.
Scope of services	Some need for improvement	Pneumococcal vaccine is included in the national immunization calendar. Rotavirus vaccine is not yet available. HPV vaccine is only available for purchase through the private sector.
Population coverage and/or access	Some need for improvement	Vaccines are refused on religious grounds. A measles outbreak occurred recently.
Quality of services	Some need for improvement	Contraindications for vaccinations are not always evidence based.

Table 12. Summary of findings on immunization

Adolescent-friendly health services (sexual and reproductive health)

No programmes target sexual and reproductive health needs of adolescents and young people; this was explained as a result of the sensitivity of the issues in terms of cultural and religious aspects. Primary health care providers reported that it is common practice for them to call the police if an unmarried adolescent girl presents as pregnant. According to the United Nations in Kyrgyzstan, 13.8% of women under 24 years are married through some form of coercion.²⁴ Legal steps have been taken to prohibit religious marriages of children.

Statistics

The Kyrgyz birth rate among girls aged 15–19 years is 65 per 1000 women, which is 2.5 times the rate in Ukraine and 11 times the rate in Norway (Fig. 12).

²⁴ UN statement on bride kidnapping and child marriage, 31 May 2018. Bishkek: United Nations Children's Fund; 2018 (https://www.unicef.org/ kyrgyzstan/press-releases/un-statement-bride-kidnapping-and-child-marriage, accessed 10 October 2019).



Fig. 12. Adolescent birth rates in countries in the Region



Source: MICS, 2014; Adolescent birth rate, situation, by country. In: World Health Organization [website]. Geneva: World Health Organization; 2018 (https://www.who.int/gho/maternal_health/reproductive_health/adolescent_fertility/en/, accessed 9 October 2018).

According to data from the MICS of 2018, which became available during report writing after the assessment visit, the adolescent birth rate is now 50 per 1000 women. While key informants from primary and secondary health care reported that adolescents do not engage in sexual activity before marriage, a UNICEF study from 2018²⁵ reported that 27% of 16–17-year-old adolescents were sexuality active and 11% of adolescents initiated

²⁵ Namazova A, Minbaeva L. Knowledge, attitudes, and practices towards immunization in Kyrgyzstan. Bishkek: United Nations Children's Fund; 2018 (https://www.unicef.org/kyrgyzstan/media/4796/file/Knowledge,%20attitudes,%20&%20practices%20towards%20immunization%20in%20 Kyrgyzstan%20.pdf, accessed 10 October 2019).

sexual activity prior to 15 years of age. 70% of sexually active adolescents reported that their last sexual intercourse took place without protection.

Table 13 shows abortion rates among Kyrgyz adolescents between 2008 and 2017, although key policy informants had concerns about the quality of the data.

Year	Abortion rate per 1000 live births (%)	Absolute number	Proportion (%)
2008	14.2	1815	43.5
2009	14.6	1936	46.3
2010	14.3	1923	51.3
2011	15.4	1817	51.8
2012	15.5	1778	43.9
2013	14.4	1697	58.5
2014	15.8	1975	45.0
2015	14.4	1443	44.1
2016	13.2	1523	55.1
2017	12.3	1454	67.9

Table 13. Abortion rates and absolute number in girls aged 12–19 years (national data)

Source: Data on medical and surgical abortions, 2008–2017. Bishkek: Ministry of Health; 2018.

Legislation

The key legal act governing reproductive health care is the Law on Reproductive Rights of Citizens, but legislation on provision of sexual and reproductive health services to adolescents is inconsistent. The Law on Reproductive Rights states that adolescents can receive health services without the consent of their parents or lawful representatives from the age of 16 years. Conversely, the Child Protection Law states that no services can be offered to a child under the age of 18 years without parental consent.

Adolescents requiring medical services or vaccinations must go to facility of their residence, which is difficult for young people studying in a different city, and usually does not facilitate privacy. Underage girls are rarely able to access the one-time childbirth benefit (amounting to 300% of warranted minimum income provided that average per capita aggregated income of a family does not exceed the size of warranted minimum income) because they may not aware of such opportunity and, being dependent on other family members, have no chance to gather the documents required to claim it.

Service delivery

Adolescent-friendly services were introduced in 2008 with support of donor agencies, but most have not been operating since 2012. Kyrgyzstan used to have at least 10 clinics focusing on adolescent health services, but most or all of them have closed due to insufficient funding, except three centres that are still active because of individual commitment in Bishkek, At-Bashi and Naryn. Standards for adolescent-friendly health services were developed with external support but have not been approved by the Ministry of Health.

Every family medicine centre reportedly has a doctor in charge of adolescent health, and when a child reaches 14 years, he or she is transferred to this doctor to receive a blood test, chest fluoroscopy, urine test and a stool test for parasites. WHO has advised against indiscriminate mass screening for TB with chest photo-fluoroscopy

as a potentially harmful practice since the 1970s, based on the risk of exposure to ionizing radiation doses, particularly among children and adolescents, as well as the unfavourable cost/benefit ratio.

Further screening takes place in schools for weight, height, iodine deficiency and similar. No evidence exists of the benefit of these mass screenings.

Some primary health care facilities have a doctor and nurse providing services to adolescents, but this mainly consists of screening and medical examination for entering military service at 16 years of age (pre-conscription examination) rather than services according to global standards for quality. The majority of health care staff providing services to adolescents have not been specifically trained in their care. WHO and the United Nations Population Fund worked to produce an adolescent-friendly services manual, but this has not been endorsed by the ministry and is not widely used by providers.

Interviewees from tertiary health care facilities reported that contraception for adolescents under 16 years was given based on providers' discretion, without parents being informed. Key government informants stated that there is a gap in service for children and adolescents aged 6–18 years. Further, as adolescents and young people are often not yet employed, they do not have health insurance and cannot pay for services. There is a need for an adolescent programme based on confidentiality and trust with adolescent specialists, including psychologists to provide counselling for gender-based violence, urology and sexual and reproductive health services.

Contraceptives

A 2013 unpublished assessment of needs and gaps in ensuring family planning commodities in Kyrgyzstan shared with the assessment visit team showed that 79 girls aged 12–14 years (2.5 per 1000 girls of this age) and 10 411 girls aged 15–17 years (50.8 per 1000 girls of this age) used contraceptives; condoms (51.9%) and oral contraceptives (34.8%) were the main methods. It was also reported that, since 2013, contraceptive use by adolescents has decreased by 9.5%, owing to low awareness of methods of contraception, which is thought to be a result of young people having limited access to sexual and reproductive health information and services. Sexuality education has been introduced as an optional part of the "healthy lifestyle" curriculum in the schools, which was approved by the Ministry of Education and Science and integrated as an optional subject in the school programme (10 lessons per year for grades 6–11). The healthy lifestyle curriculum in the vocational education system is integrated as a mandatory subject, consisting of 24 lessons per academic year. Both curricula were aligned with the WHO and German Federal Centre for Health Education-recommended sexuality education is often either not provided or inadequate, and is largely seen as the responsibility of parents. It is a very sensitive issue in the country due to existing misconceptions and growing conservatism in society.

Contraceptives were provided through grant-based assistance until 2015 and are not locally sourced. Procurement of contraceptive commodities by international organizations has been limited in recent years and does not fully meet the needs of low-income and vulnerable population groups, including adolescents. The SGBP list of medicines and medical devices updated in 2018 has IUDs and oral contraceptives (Rigevidon and Trigerol), so insured women and pregnant women with 12 months of MHIF insurance can obtain them on prescription for a discounted price (50–60% discount). Key policy informants reported increased government funding of 3 million Kyrgyz som/US\$ 42 000 for contraceptives, but this will not cover all adolescents and vulnerable groups. Plans are reported to increase public funding for contraceptives gradually to meet the needs of 50% of the women with high medical and social risks of maternal mortality by 2023.

Some health facilities visited had Depot medroxyprogesterone acetate in injectable form sold under the brand name Depo-Provera or IUDs available but no oral contraceptives. A prescription is provided on request for oral contraceptives, which need to be purchased from the pharmacy with resulting OOP payments. At primary health care facilities without an obstetrician/gynaecology specialist, the client has to go to a hospital for IUD insertion.

Key informants at one facility focusing on reproductive health expressed concerns regarding health providers' prejudices towards contraceptives – specifically oral contraceptive pills. Some primary care providers were said to have reservations about these, with non-evidence-based concerns about significant long-term side-effects, such as infertility and the overall danger of prescribing hormones for young people.

Given the lack of mandatory centralized reporting, and the fact that the private sector does not report abortions at all, it is difficult to estimate the exact number of abortions. There is concern that abortion may be underreported, given the increasing availability of medical abortions from the private sector. Despite this, the official eHealth annual number of reported abortions has not declined in the past decade.

The price for an abortion varies significantly: from 190 Kyrgyz som/US\$ 2.70 at a public health facility (not including the cost of ultrasound, consultation and any relevant blood tests) to 12 000 Kyrgyz som/US\$ 172 in a private clinic. Moreover, "unregistered" pregnancies followed in private facilities may cost more than those that are registered.

Medical abortions can be accessed if the pregnancy is less than nine weeks at a cost of 4200 Kyrgyz som/US\$ 60 to 10 500 Kyrgyz som/US\$ 150 in private facilities and around 1400 Kyrgyz som/US\$ 20 to 3500 Kyrgyz som/US\$ 50 in state facilities. Medications for medical abortion are also reportedly available for purchase without prescription on the black market. One key informant stated that the cost to the MHIF of abortions in hospitals exceeds the total amount spent by the Ministry of Health to purchase all contraceptives.

Table 14 sets out a summary of the assessment's findings on adolescent-friendly sexual and reproductive health.

Attribute	Rating	Criteria for rating
Protocols and legislation	Considerable need for improvement	Standards for quality of adolescent health services are not in line with global standards.
Scope of services	Considerable need for improvement	Services provided are not in line with international standards. They include screening and pre-military examinations rather than adolescent-friendly health services.
Population coverage and/or access	Considerable need for improvement	Adolescent-friendly health services are no longer available. Adolescents cannot seek health care outside their place of residence. No information was available on access to services in the private sector.
Quality of services	Considerable need for improvement	Services for adolescents are limited to screening. Contraceptive choices are not provided. Staff are not trained in adolescent-friendly health service standards or the sexual and reproductive health rights of adolescents.

Table 14. Summary of findings on adolescent-friendly sexual and reproductive health

Policy recommendations

Significant improvements have been made to health services in the drive towards universal coverage for SRMNCAH services. Further, financial protection of women and children in need of health services is better in Kyrgyzstan than in other countries with a similar GDP.

The assessment showed, however, that not all essential SRMNCAH services are provided with adequate quality at the relevant level, at no or at affordable cost to the patient. This results in barriers to access to essential SRMNCAH services, and some patients seek alternative ways of obtaining treatment, including bypassing primary health care or using the private sector; this may result in a growing parallel system, exacerbating health inequities.

Savings and efficiency gains in service organization, delivery and financing will be crucial to ensuring greater coverage of SRMNCAH while safeguarding the quality of services provided. The recommendations proposed below are intended to provide a basis for policy changes and implementation arrangements along the essential pillars of UHC, with a focus on SRMNCAH.

Strengthening governance for SRMNCAH

A wide number of protocols based on evidence and international guidelines have been developed for SRMNCAH. Despite this, overhospitalization of patients with ambulatory-sensitive conditions, which could be treated better and more efficiently at the outpatient level, is a major challenge.

- The structure of the SGBP should be altered so that citizens are not able to opt out of insurance payments, or similarly not able to opt in to payments only when they need health services. The increased financial contributions will allow a greater proportion of GDP to be spent on health care services, resulting in greater access to high-quality care.
- Evidence-based guidelines and protocols for when to admit and refer patients to hospital should be followed, and measures put in place for their re-enforcement at both the primary health care and hospital levels.
- The system of ambulance and emergency transports to hospitals should be reviewed, including compliance with standards and norms for ambulances (including adequate space, functionality and equipment for care during transport, and sufficient ambulances to meet the needs of population), protocols for interfacility transfer criteria and compliance monitoring.
- Waiting times for transport of mothers and neonates should be reduced, and staff adequately trained and remunerated.
- Stronger political commitment is required to reduce existing inequities in sexual and reproductive health for adolescents and young people. High adolescent birth rates need to be prioritized. The benefits package, and the way services are organized and delivered, does not ensure sexual and reproductive health coverage for adolescents. A major effort should be made to improve availability of adolescent-friendly sexual and reproductive health services, including contraceptive services and commodities, emergency contraception, prevention and management of STIs and HPV immunization, without social and financial barriers.
- The legislation on reproductive health and child protection should be reviewed to allow adolescents formalized legal access to more defined, autonomous, confidential, non-judgemental and appropriate health services.

- Community engagement for SRMNCAH should be expanded. Health literacy activities and initiatives should be introduced in collaboration with the education sector (such as information on contraception and sexuality education, as well as use or misuse of antibiotics). Work should be done with communities to highlight evidence-based care, including use of oral medications for pneumonia and outpatient treatment of mild childhood illnesses.
- Engagement with religious leaders should be undertaken to allow access to immunization and adolescent sexual and reproductive health care.
- Multisectoral collaboration in the area of SRMNCAH should be analysed, with the aim of identifying and optimizing the most important entry points for action, such as sex education and prevention of and response to gender-based violence. Work should be done with the education sector to introduce school-based programmes to promote healthy sexual development, sex education, safe sex, prevention of STIs and other topics related to sexual health.
- Current accountability mechanisms should be reviewed and areas for improvement identified, including for joint action and monitoring across sectors.
- Rights-based approaches to health, achieving equity and "leaving no one behind" should become an explicit objective for all SRMNCAH policies, implementation and monitoring/evaluation activities. This includes:
 - involving a broad range of partners within and outside government, including representatives of the populations concerned, in the formulation of strategies and action plans to provide services to population groups with specific needs;
 - setting policy targets for closing equity gaps for example, between geographical areas and population groups presenting all SRMNCAH data disaggregated for sex, age, geographical location, ethnicity and wealth and monitoring the data over time to ascertain that equity gaps are closing;
 - targeting SRMNCAH services to population groups with specific needs, including people with lower socioeconomic status and other vulnerable, disadvantaged and hard-to-reach groups, and ensuring that those services are provided free of charge and made accessible.

Improving service delivery and coordination between providers and strengthening evidence-based practice

The balance between resources spent on keeping available a large number of hospitals and beds and the need to strengthen the primary health care level – and particularly ensuring adequate salaries for health workers – needs to be reviewed.

- Needs for and distribution of all existing health facilities, their location and human resources (including required competencies, skill mix, incentives and disincentives) should be reviewed. In particular:
 - services provided by feldsher-midwifery health posts should be assessed concentrating resources to provide improved quality of care at family medicine centres and to ensure transport services should be considered;
 - delivery care and management of obstetric complications at facilities with appropriately trained staff and the necessary equipment should be ensured, since certain functions – such as obstetric care, deliveries and intensive neonatal care – require a certain case-load per year to be performed safely;
 - provision of safe neonatal transport should be ensured throughout the country: as many regions of Kyrgyzstan are rural and not accessible by road transport, alternative modes of transportation (such as

aviation vehicles) should be considered for use, to ensure safe delivery of neonates for timely care, and available road vehicles should be properly equipped for neonatal resuscitation.

- Treatment of common childhood conditions should be reviewed and should be subject to global, evidence-based standards. Use of intramuscular and intravenous antibiotics should be re-examined in the context of clinical presentation of cough, and more judicious use of pharmacological treatments should be considered for such patients.
- Primary health care services are often fragmented, resulting in multiple referrals, so access to high-quality comprehensive SRMNCAH services at the primary care level should be strengthened to ensure diagnosis and treatment. For example, the system for STI diagnosis and treatment should be reviewed in the light of advances in rapid tests, moving towards point-of-care testing and treatment with the aim of avoiding multiple referrals and fragmentation.
- Collaboration and coordination between family doctors and specialized ambulatory units should be strengthened.
- Evidence-based practice should be strengthened at all levels. Non-evidence-based, costly and potentially harmful practices with unclear benefit, such as dispensarization, should be discontinued.

Adjusting health financing to improve support for SRMNCAH

Financial protection of the population remains a primary strategic objective for the government. The new health strategy calls for development of an insurance package that will cover a broad spectrum of essential guaranteed services for the population and protect them from catastrophic health expenditure, while including access to vital medicines. Only 73.6% of population is currently covered, however, which means that almost a quarter of citizens are not entitled to the benefits of the SGBP and ADP.

The fact that not all who are employed contribute to the mandatory health insurance limits the availability of funding pooled through insurance contributions. The financial gap is estimated to be 27–39%, showing that contributions do not provide sufficient funding for the SGBP. Further, the focus of health insurance package in general is mostly on treatment and hospital services

The assessment team recommends the following.

- The efficiency of the SGBP should be increased by introducing policies that target vulnerable populations. Better targeting criteria ensure that those in most need have access to health services without financial risk should be developed.
- Entitlements should be realistic, transparent and understood by the population; it should also be ensured that they are provided according to the policy.
- The new health insurance package should include greater focus on ambulatory preventive services, such as contraceptive services and commodities, STI prevention and HPV immunization.

Reducing OOP expenditure on essential medicines and health products for SRMNCAH

High levels of OOP expenditure indicate that not only uninsured people but also those who are insured face financial risks when accessing health care services. Informal payments for health care services should be discouraged. This can only be achieved through transparent open dialogue, addressing the salaries of health care workers and the conditions in which they work. Physicians should be entitled to appropriate remuneration for delivery of services, paid appropriate wages for their work and remunerated for overtime hours.

- Payment mechanisms for primary and hospital care providers should be reviewed to ensure that they do not provide incentives for unnecessary hospitalizations.
- Financial protection of the population should be safeguarded by expanding the list of outpatient medicines, while increasing funding flows to the ADP.
- Price regulation should be introduced at various levels, including control of pharmacy margins.

Strengthening human resources for provision of SRMNCAH services

There is a perceived lack of human resources, with brain drain and an increasing ageing health workforce, which is not equally distributed across the country. At the same time, in many settings health care workers see only few patients a day.

The primary health care system is built around family doctors as the main entry point to access health services, but in many instances this level is bypassed and/or not fully functioning in a coherent way, causing fragmentation of services.

The assessment team recommends the following.

- The existing workforce should be reviewed, and a plan developed for redistribution to ensure adequate number of nurses, doctors and specialists throughout the country and its regions.
- The norms and need for staffing at all levels should be reviewed and a process begun to phase out unused service delivery points to free up financial and human resources for more strategic use.
- An assessment of regional hospitals and clinics should be carried out, with the goal of restructuring provision of health care services to avoid overstaffing and ensure appropriate use of hospital and primary care facilities. Patient data should be analysed to predict the number of patient visits and inpatient admissions, and the consequent number of staff required to provide such services.
- Provision of housing, supported utilities costs, education for children and adequate mentoring, supervision and professional development should be ensured in underserved areas of the country.
- Remuneration of health workers should be reviewed to diminish the risk of migration and informal payments from patients.
- Pre-service education, including evidence-based practice for SRMNCAH, when to refer and indications for hospital admissions should be ensured.
- Continuing professional development, with simulation drills of standard SRMNCAH consultations, normal delivery and management of obstetric, neonatal and child emergencies should be introduced.
- Specific in-service sessions on aspects of SRMNCAH care should be introduced, including rational use of antibiotics, medical eligibility criteria for contraceptive use, criteria for diagnosing and managing pregnancy and obstetric complications and evidence-based contraindications to vaccinations.
- Incentives/disincentives for providing SRMNCAH services should be reviewed, since referral is currently the "easy" choice, and other factors that may undermine the perception of primary care providers and their competencies should be investigated.

Expanding and strengthening health information systems

A well functioning health information system is a prerequisite for informed decision-making at all levels. For SRMNCAH services, disaggregation of data – particularly for coverage of marginalized populations, age and sex, but also for other parameters such as rural/urban locations and wealth quintiles – is essential to understand and address equity issues.

- All data reported in the health information system should be disaggregated by sex and age as a minimum.
- Information gaps on SRMNCAH should be reviewed in the context of UHC, particularly with regard to data on equity and vulnerable populations.
- Evidence on the quality of public services and barriers to access to SRMNCAH should be collected on a regular basis.
- Health information and performance monitoring systems should be used to improve outcomes and accountability. Existing data on SRMNCAH status, quality and the performance of health service providers should be used in conjunction, for analysis and generation of actionable information for policy-making and programming at all levels.

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