KYRGYZSTAN

MDG ACCELERATION FRAMEWORK

IMPROVING MATERNAL HEALTH IN THE KYRGYZ REPUBLIC

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NOVEMBER 2013

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LIST OF ABBREVIATIONS

AH	Association of Hospitals
ANC	Antenatal care
ARV	Antiretroviral therapy
AVE	Agency for vocational education
BFC	Baby-friendly clinic
BMC	Bishkek Medical College
CA	Contraceptive agent
CCM	Country Commodity Management
CIS	Commonwealth of Independent Countries
CP	Clinical protocols
CQI	Continuous quality improvement
DFID	UK Department for International Development
DH	District hospital
DHS	Department of Human Services
DMMT	Department for Medicines and Medical Techniques
DRG	Drug-related groups
ENM	Early neonatal mortality
EOC	Emergency obstetric care
EPC	Effective perinatal care
ESP	Ensuring safe pregnancy
FAP	Rural medical points
FAW	Fertile-age women
FGP	Family Group Practitioners
FGPA	Family Group Practitioners Association
FMC	Family Medicine Centre
GFATM	Global Fund to Fight AIDS, TB and Malaria
GIZ	German Agency for International Cooperation
HC	Health committees
HEE	Higher educational establishment
HF	Health care facility
HCO	Health care organizations
HIV/AIDS	Human immunodeficiency virus/Acquired immunodeficiency syndrome
HOOP	Household's out-of-pocket payments
ICD	International Classification of Diseases
ICPD	International Conference on Population and Development
ILD	Index of Labour Distribution

IMCI	Integrated management of child illnesses
IMPC	Integrated management of pregnancy and childbirth
IVF	In-vitro fertilization
KAE	Kyrgyz Academy of Education
KfW	German Development Bank
KR	Kyrgyz Republic
KSIRCME	Kyrgyz State for Retraining and Continuous Medical Education
KSMA	Kyrgyz State Medical Academy
KSSHP	Kyrgyz-Swiss-Swedish Health Project
LR	Legal regulations
LSA	Local state administration
LSG	Local self-government
M/P	Medicines/pharmaceuticals
MAC	Medical Accreditation Commission
MAF	Millennium Development Goals Acceleration Framework
MCPC	Managing complications in pregnancy and Childbirth
MD	Ministry of Defence
MDG	Millennium Development Goal
MES	Ministry of Emergency Situations
ME&S	Ministry of Education and Science
MF	Ministry of Finance
MFA	Ministry of Foreign Affairs
MH	Ministry of Health
MLMY	Ministry of Labour, Migration and Youth
MHIF	Mandatory Health Insurance Fund
MI	Medical items
MICS	Multiple indicator cluster survey
MIS NMCHC	Management Information System of National Mother and Child Health Centre
MJ	Ministry of Justice
MM	Maternal mortality
MSD	Ministry of Social Development
MVA	Manual vacuum aspiration
NGO	Non-governmental organization
NMCHC	National Mother and Child Health Centre
NMCR	Near-miss case review
NA	Normative acts

NSC	National Statistical Committee
PAP	Perioperative antibiotic prophylaxis
PHC	Primary health care
PLHIV	People living with HIV
PM	Perinatal mortality
PMTCT	Prevention of mother-to-child transmission
PNR	Primary neonatal resuscitation
PPP	Public-private partnership
PTVRC	Public Television and Radio Corporation
RBF	Results-based financing
RHC	Rural health committees
RK	Republic of Kazakhstan
RMIC MH KR	Republican Medical Information Centre of the Ministry of Health of the Kyrgyz Republic
RSH	Reproductive sexual health
SBP	State Guaranteed Benefit Programme
SF	Social Foundation
STIs	Sexually transmitted infections
SWAp	Sector-wide approach
TH	Territorial hospitals
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USR	Ultrasound research
UTI	Urinary tract Infection
VE	Vocational education
WB	World Bank
WHO	World Health Organization
YFO	Youth-friendly organizations
YFS	Youth-friendly services
ZAGS	Office of Vital Records

FOREWORD

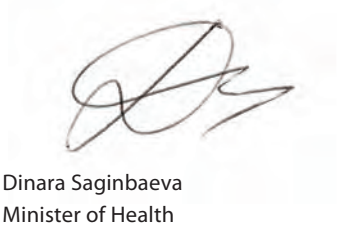
The Kyrgyz Republic is one of more than 190 countries that assumed obligations to achieve the Millennium Development Goals by 2015. The National Coordinating Committee on MDGs created by the Government of the Kyrgyz Republic is responsible for coordinating national partners, assisting in the timely realization of measures, and monitoring and evaluating the progress made. Evidence and periodic national reporting show that much progress has been made to achieve the nationally set MDG targets. However, some goals, especially Goal 5 on reducing maternal mortality, are lagging behind and the government, together with partners, is committed to making a marked improvement in achieving and sustaining results.

The MDG Acceleration Framework (MAF) methodology endorsed by the UN Development Group has been applied in more than 50 countries worldwide to support national commitments to address key bottlenecks that may be impeding sustainability of progress to date. The Government of the Kyrgyz Republic applied the MAF to address the maternal health situation (MDG 5) as a matter of urgent priority since it is one of the areas where the country has not made sufficient progress to meet the national target by 2015. To date, the political momentum is opportune for committing ourselves from all sides and angles, including at the national and local levels, to noticeably improve and protect the health of our mothers, sisters and daughters.

The Ministry of Health and the Ministry of Economy, in collaboration with other government ministries and agencies and partners, took the leading role in conducting the analysis and preparing an action plan to accelerate progress towards achieving MDG 5. During the working process, a detailed assessment of practical solutions on a wide range of interconnected issues was conducted on the basis of feasibility and effectiveness. Some of the solutions worth highlighting include access to reproductive and sexual health, prenatal and emergency obstetrics services (especially in rural areas), community support to vulnerable women, transportation and nutrition. These solutions support implementation of existing commitments reflected in national health strategies and programmes and will become an integral part of the maternal and child health component of the Den Sooluk National Health Reform Programme (2012-2016).

Two national roundtables – joined by more than 100 stakeholders, including the office of the Vice Prime Minister on Social Affairs, all main ministries and agencies, the representatives of the health care sector at the primary, secondary and tertiary levels, local governments, and community and civil society representatives – were held in order to develop consensus on the best way forward to jointly address this important social issue. In addition, the MAF Action Plan was twice discussed at the meeting of the Coordinating Committee on MDGs and approved by the ministries and agencies as well as by NGOs and international organizations in September 2013. The main MAF recommendations lie in strengthening intersectoral and inter-ministerial cooperation, providing timely and full support in implementation of policies and measures already spelled out in the Den Sooluk National Programme, and ensuring continuous care and support to vulnerable women, who have been thus far excluded from existing services due to a variety of social, economic and other reasons. The Ministry of Health and the Ministry of Economy, together with other government ministries, agencies and our partners, stand ready to deliver concrete and measurable results to improve the health of mothers and women in the Kyrgyz Republic.

Temir Sariev
Minister of Economy
The Kyrgyz Republic



Dinara Saginbaeva
Minister of Health
The Kyrgyz Republic

FOREWORD

Since the adoption of the Millennium Declaration at the United Nations Summit in 2000, the Kyrgyz Republic has been making steadfast efforts to achieve the Millennium Development Goals (MDGs). The Third National Report on Progress towards MDGs in the Kyrgyz Republic was presented to the UN General Assembly in September 2013 and noted that progress towards each goal has been uneven. Even though substantial progress has been made in reducing extreme poverty, improving child health and water supply, a high rate of maternal mortality remains as a major concern.

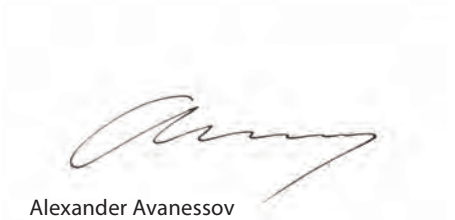
The maternal mortality rate in the Kyrgyz Republic for the last decade virtually never dropped below 50 deaths per 100,000 live births, a rate that is much higher than the national indicator set for 2015 (15.7 per 100,000). According to the latest data, Kyrgyzstan has the highest maternal mortality rate in Eastern Europe and Central Asia and the average annual rate of reduction in maternal mortality there from 1990 to 2010 has reached only 0.2 percent, while the global average is at 3.1 percent.

In particular, poor women, women living in rural areas and young women are exposed to high risks during pregnancy and childbirth. Many causes can be attributed to poor health care infrastructure in regions, hindered access to clean water and sanitation, electricity and heating, the poor condition of roads, as well as inadequate capacities of Family Group Practitioners (FGPs) and family medical centres, especially in remote and rural areas. Other adverse factors include inadequate nutrition of pregnant women, leading to the emergence of diseases such as anemia that also increase the risk of maternal death in childbirth. In 2012, 48.4 percent of all births in the country registered various complications due to anemia and other preventable causes.

Internal and external migration are also negatively affecting maternal health. Migrant women often remain beyond the reach of counselling and care by health practitioners, a fact that worsens the chances of successful outcomes during pregnancy and birth. There is a growing number of deaths during childbirth among migrant women who moved from rural areas to other regions (Bishkek, Chui oblast, oblast centres) and outside the country. Given the lack of sustained progress in Goal 5 (maternal health), the government, together with partners, decided to apply the MAF for the development of practical and high-impact solutions to existing bottlenecks. The partnership established during the MAF process within government agencies, local governments, experts in the health sector, UN agencies, donors and civil society helped emphasize the multidimensional nature of maternal health and brought together social, cultural, economic, legal and other factors. Such broad arrangements are important not only for the health of the nation, but also for the sustainable development of the country.

This report is the result of joint efforts and includes a situational analysis that identifies the main causes of maternal mortality, including socio-economic factors affecting this indicator, and describes the ongoing and strategic interventions as well as bottlenecks and solutions for priority interventions. An estimated amount of financing needed for each recommendation is also included. The MAF solutions will be implemented as part of the national healthcare reform programme, Den Sooluk (2012-2016), support through the SWAp mechanism.

Recognizing the need to drastically reduce maternal mortality, the necessity to promote maternal health, and the requirement to fulfil the Kyrgyz Republic's international obligations, the Government of the Kyrgyz Republic, the Parliament of the Kyrgyz Republic, the expert community, civil society and local governments are committed to fully implementing the MAF Action Plan with the support of the United Nations system and partners. I am convinced that the joint partnership efforts on financial, technical and other types of support to proposed solutions can help increase the efficiency and quality of delivered care, improve maternal health outcomes and strengthen the overall capacity of the national health system.



Alexander Avanessov
UN Resident Coordinator,
UNDP Resident Representative to the Kyrgyz Republic

EXECUTIVE SUMMARY

This report presents the Action Plan to accelerate progress towards MDG 5 in the Kyrgyz Republic. It also includes a situation analysis and a description of priority interventions, bottlenecks and solutions that can deliver high impact results in the medium term. This initiative is implemented as part of the roll-out of the MDG Acceleration Framework (MAF)[1] developed by UNDP and endorsed by the United Nations Development Group. The MAF provides national stakeholders with a systematic approach to identify and analyse bottlenecks that are causing MDGs to veer off track or to move ahead too slowly. It then aims to generate a shared diagnostics and recommends comprehensive, collaborative and focused actions based on prioritized acceleration solutions. It also helps governments to focus on disparities and inequalities, two of the major causes of uneven progress, by particularly responding to the needs of the vulnerable.

Following the review undertaken as part of the last report on progress towards the MDGs, the greatest progress in achieving the MDGs is observed in MDG 1 (eradicate extreme poverty), MDG 2 (achieve universal primary education), MDG 3 (promote gender equality and empower women), and MDG 7 (ensure environmental sustainability). Also, according to global estimates, the Kyrgyz Republic is on its way to achieving MDG 4 (reduce child mortality).[2] Insufficient progress made towards achieving the target values of indicators of MDG 5 (improve maternal health) and MDG 6 (combat HIV/AIDS, malaria and other diseases) is a special concern. In addition to these off-track goals, there is an increasing risk of reversal of the progress made to date.

The issue of maternal health has social and political implications. The lack of progress towards MDG 5 requires consolidated efforts on the part of national stakeholders and development partners. Thus, MDG 5 has become the major object for MAF's impact in the Kyrgyz Republic. With this in mind, the Government of the Kyrgyz Republic has expressed its exceptional commitment to addressing the issues related to the achievement of MDG 5.

The analysis shows that maternal mortality is determined by multiple direct and indirect causes during the gestation, childbirth and post-partum periods. About 80 percent of maternal deaths are due to direct causes (direct maternal deaths from obstetric causes). The four major causes include post-partum hemorrhage, hypertensive disorders, post-partum infections (mainly sepsis) and obstructed labour. The indirect causes (20 percent) of maternal deaths are the diseases that complicate gestation or are aggravated by pregnancy, such as tuberculosis, pneumonia and pleuritis, acute hepatitis, cardiovascular diseases and cardiac malformation, and HIV/AIDS.

1. MAF – MDG Acceleration Framework.
2. Countdown to 2015. Building a Future for Women and Children, The 2012 Report.

The causes leading to maternal mortality, among other things, are associated with a range of socio-economic and cultural factors, the state of public health, demographic structure, behavioural skills, etc. Recently, maternal mortality is increasingly impacted by non-medical causes. Low public awareness, especially in rural areas, of methods of family planning, of reproductive health and safe contraceptives, of the danger signs of pregnancy, and of the importance of timely health care, as well as family members' lack of awareness of danger signs during pregnancy, combined with poor nutritional habits, inadequate rest, and insufficient preparation for childbirth, all lead to the increased incidence of complications during pregnancy. Inadequate standards and services regarding sex education for students, teenagers and young people and forced refusal of access to contraception due to religious reasons lead to pregnancy and childbirth at early age.

The situational analysis of the causes of maternal mortality, consultations with experts from the Ministry of Health and international organizations, and focus group discussions held in various regions made it possible to identify three priority areas for the MAF in the Kyrgyz Republic: reproductive health, effective perinatal care and emergency obstetric care. The shortcomings and bottlenecks, in particular, in interventions in these areas (i.e., family planning and safe abortion, appropriate prenatal monitoring and continuity in the performance of primary health care professionals and hospitals, skilled care during childbirth and the post-partum period, and the timely and full provision of emergency obstetric care) lead to major direct causes of maternal mortality.

Each of these areas is crucial for accelerating progress towards MDG 5. The Action Plan was developed during two national workshops attended by the country's leading experts on maternal health, representatives of regions, concerned government agencies and donor organizations. They identified three specified target areas on the basis of definitions of the MAF's priority interventions: objectives, specific interventions and solutions. The Action Plan also identifies the implementation timeframes and expected outcomes (or products) as well as the principal implementers. In order to emphasize intersectoral issues that play an increasingly important role, the Action Plan is divided into two parts. The first part identifies issues that require coordination on the part of the government, whereas the second part includes issues that fall under the sole responsibility of the Ministry of Health. It must be emphasized that the proposed progress towards MDG 5 will be at risk if these two efforts are executed apart from one another.

As part of the development of the Action Plan, financing requirements were roughly estimated based on a microeconomic approach, which includes the estimates of resources required for implementation of the proposed activities within the plan. Total required financing for 2013 to 2015 is estimated to be about 957.4 million Kyrgyzstan Som (KGS), or US $19.58 million. Given that assumption, the estimated financing shortfall will be about KGS143.6 million, or US $2.9 million. To fill this gap, funds from the state budget and donors' assistance through parallel financing can be used.

The report also proposes the monitoring and evaluation of implementation of the Action Plan. This shall be done in three areas:

1. Implementation of interventions
2. Implementation of projects
3. Achievement of the target indicators

Given the significant challenges to achieving the MDG targets on maternal health and the short time remaining before 2015, this report proposes to put aside the overly ambitious target indicators and instead to focus on those actions that can help establish a solid foundation to accelerate and sustain the results. This effort is timely and its implementation should lead to the emergence and consolidation of positive trends in the reduction of maternal mortality.

I. INTRODUCTION

Photo: Ramis Djailibaev / UN Kyrgyzstan

In a follow-up to the Millennium Summit in 2000, the Kyrgyz Republic joined the countries that signed the Millennium Declaration and committed to achieve the eight goals known as the Millennium Development Goals (MDGs). Since the signing of the Millennium Declaration, the Kyrgyz Republic has made some progress towards elaborating clear national goals and objectives within the MDGs framework, integrating the MDGs into the country's development strategies and plans, and improving the monitoring system and overall enabling environment for achieving the MDGs. In 2009, the Coordination Committee for achieving the Millennium Development Goals in the Kyrgyz Republic was established. Its main function is to ensure the coordination of the main government ministries and agencies, local public administrations and local self-governments, international organizations and academic institutions, and representatives of civil society involved in the implementation of actions aimed at achieving the MDGs as well as the monitoring and evaluation of progress.

Since the incumbent commitments to achieve the MDGs, three reports on the progress towards the Millennium Development Goals have been published in the country. Whereas the first report sought to elaborate the MDG goals and indicators for monitoring the progress towards these goals, the second and third reports were focused on assessment of the progress of these indicators and on assessment of the external and internal risks hindering the achievement of the MDGs by 2015. According to the latest report,[3] the Kyrgyz Republic is behind on almost half of the MDG indicators from the set target benchmarks and the attainment of some of the MDGs by 2015 may not be possible.

Following the analysis made in the last report on progress towards the MDGs, the greatest progress is observed with respect to MDG 1 (eradicate extreme poverty), MDG 2 (achieve universal primary education), MDG 3 (promote gender equality and empower women) and MDG 7 (ensure environmental sustainability). The positive trends over past several years with respect to MDG 4 (reduce child mortality) make it possible to include this MDG in the list of those for which the target indicators can be achieved.[4]

According to the report in question, the goal of halving extreme poverty as set within the framework of MDG 1 has been achieved, as the rate of extreme poverty in the country was 6.1 percent in 2008, compared to the baseline of 24.7 percent. However, progress on this indicator has substantially slowed down. The reduction of other indicators of extreme poverty, such as the ratio of underweight children aged 1 to 6 years and the ratio of the population consuming less than 2,100 kilocalories (60 percent - 2000, 44.7 percent - 2011)[5], is progressing at a much slower pace There is a real risk of reversal for all indicators related to poverty reduction and nutrition and, in some regions, these indicators are substantially worse off than the national average.

The literacy rate of the population aged 15 to 24 years, which is the indicator for monitoring progress towards MDG 2, is traditionally high among boys and girls in the Kyrgyz Republic and reaches almost 100 percent. However, there is a slight lag from the set goal in the indicator of the ratio of students in primary school to total number of eligible children (97.1 percent for boys and 96.3 percent for girls). The progress towards achieving MDG 3 is generally observed by indicators of the proportion of women among

3. Progress towards the Millennium Development Goals, Bishkek, 2013.
4. The development of the third MDG Progress Report has been just finalized. The data below were obtained through consultations with the authors of the report after drafting.
5. MDG Monitoring, NSC.

members of parliament and the proportion of women among university students, whereby the target value of 30 percent threshold for women among MPs was achieved by reaching 31.1 percent[6] in 2009. Nonetheless, there is a gap in indicators related to the economic situation of women, particularly in terms of the wages of women and men and the proportion of women among the economically active population. In terms of MDG 7, the Kyrgyz Republic has achieved it and is far ahead of target benchmarks for emission of greenhouse gases, carbon dioxide and consumption of ozone-depleting substances. In addition, the goal to reduce the proportion of the population with no access to safe potable water was met, while achievement of improving the living conditions of the population who have sustainable access to sanitation is questionable. The goal of meeting the target values for halting the process of the depletion of environmental resources has not yet been achieved, despite some progress on indicators for forest areas and especially protected areas.

For the first time, Kyrgyzstan is on the way to achieving MDG 4 (reduction of child mortality). This means that continued efforts to implement the key interventions can promote the attainment of this goal by 2015. Indeed, the data of five recent years show a very good trend. For example, the mortality of children under five was reduced from 35.3 in 2007 to 24.5 per 1,000 live births in 2011; in other words, the average annual reduction rate was 8.9 percent. The infant mortality rate has been reduced by the same rate. However, if the progress continues at the current rate, the target may not be achieved. Therefore, it is necessary to redouble efforts and reinforce them with more concerted actions in order to avoid a possible gap.

The possibility of achieving the target indicators of MDG 5 (improve maternal health), MDG 6 (combat HIV/AIDS, malaria and other diseases) is of particular concern. The Kyrgyz Republic has achieved its targets in none of the specified indicators; moreover, the trend shows a deterioration in most of the indicators for monitoring progress towards these MDGs. The control of HIV/AIDS and other major diseases carried out within the framework of MDG 6 is also lagging behind, according to the progress indicators for monitoring this goal. It is necessary to pay more attention to issues related to the prevention of HIV infection among women of reproductive age and among children, as the achievements in these areas directly correlate with progress towards MDG 4 and MDG 5. The greatest progress has been achieved with regard to tuberculosis and malaria: the mortality rate from tuberculosis was 11.6 cases per 100,000 people in 2011 (compared to 13.5 per 100,000 people in 2000) and the incidence of malaria cases was 0.8 per 100,000 people in 2011, compared to 80-132 cases per 100,000 in 2002 (RMIC data). At the same time, the incidence of HIV and drug abuse in the country is high, as there is a critical nexus between these two diseases. Thus, according to the survey, the prevalence of HIV infection among injecting drug users in 2009 was 14.3 percent and the main route of HIV transmission, as before, remains injection (67 percent throughout the entire period of the epidemic).

The key progress indicators of MDG 5 also testify to considerable lagging behind the set targets. The maternal mortality rate in the last decade almost never fell below 50 per 100,000 live births and even never approached the target benchmark of 15.7 per 100,000 live births. Thus, according to recent data, the Kyrgyz Republic has

6. The last assessment has shown that this share increased to 20.8 percent in 2011. Source: 'MDG third report'.

the highest maternal mortality rate among the countries of Eastern Europe and central Asia and the average annual pace of reducing maternal mortality rate from 1990 to 2010 was 0.2 percent, compared to 3.1 percent globally.[7]

The global economic crisis of 2008 had a significant impact on achievement of the MDGs. Although the country is not well integrated into the global economy, a fact that has contributed significantly to preventing the bankruptcy of the banking system, the global economic crisis has led to a decrease in economic growth and to inflation in the country. This, in turn, has affected such indicators as the slowdown in trade, construction and industrial production, the appreciation of loans, and the reduction in the rate of growth of direct investment in general, and especially the appreciation of the consumer basket as well as migration processes.

The global economic crisis has caused a decline in real budget spending, including spending on social services and the health care system. The Mandatory Health Insurance Fund (MHIF) was the hardest hit by the crisis, as the financing of the MHIF is dependent on the state budget. The Fund's budget, as well as per person health expenditure from the government has been reduced by almost half in 2008 (the crisis year).

Thus, the global economic crisis adversely affected progress towards the MDGs by stunting the GDP growth rate, remittances and budgetary resources, which are required to achieve the MDGs. Rising prices also significantly harmed progress toward the MDGs because the population had reduced purchasing power.

In addition, climate change worked against achievement of the MDGs by significantly harming the conservation of biodiversity. The key challenges related to global climate change have already been manifesting themselves: increased lack of access to water, increased desertification, increased frequency of extreme weather events, local destruction of ecosystems and, as a consequence, a growing threat to the health of people. The sectors most sensitive to climate change include food production and energy generation, disaster prevention, and access of regional economies to the Central Asia Water Basin.

Given the lack of sustained progress toward achieving MDG 5 in the Kyrgyz Republic, it was decided to use the MDG Acceleration Framework (MAF), which helps identify and rank the bottlenecks to main strategic interventions for the MDG targets lagging behind and identify priority 'acceleration' solutions to these bottlenecks. The MAF is applied to the following two targets within MDG 5:

- Objective 1: To reduce maternal mortality rate over the period of 1990 to 2015 by three quarters.
- Objective 2: To ensure universal access to reproductive health care services by 2015.[8]

7. Trends in Maternal Mortality: 1990 to 2010. Estimates developed by WHO, UNICEF, UNFPA and The World Bank, World Health Organization 2012.

8. The National Reproductive Health Strategy was developed in the country (2006 – 2015). Owing to a lack of earmarked financing, the priorities of the first stage (2006-2010) were implemented partially (two legal and regulatory documents were adopted, the awareness-raising activities were conducted on sexual/reproductive health, HIV/AIDS and STIs, supplies of contraceptives, etc.). Currently, the Plan of Actions and sources of financing of the second stage are being updated (2011-2015).

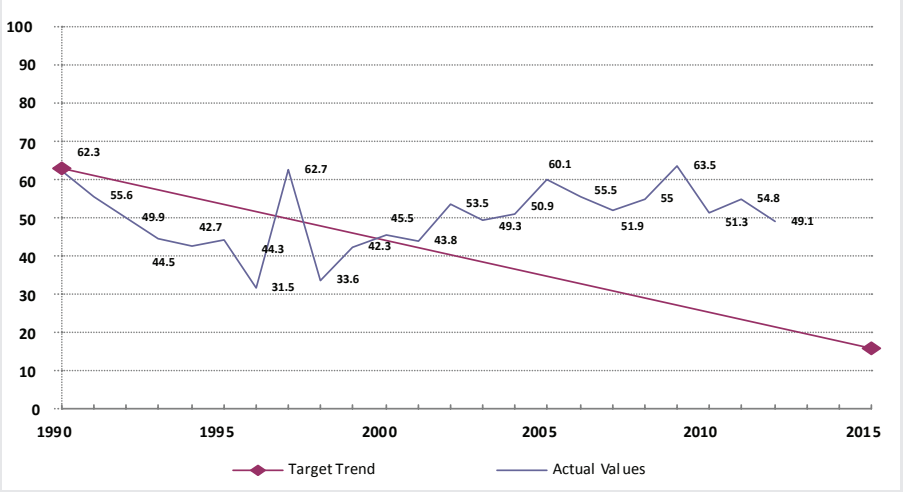
II. PROGRESS AND CHALLENGES IN ACHIEVING MDG 5

Photo: Aida Mambetkulova / UN Kyrgyzstan

2.1. MDG 5 KEY INDICATORS TREND

According to current official statistics, the situation has deteriorated with respect to nearly all indicators for MDG 5.[10] According to the National Statistical Committee (NSC), Figure 1 shows that the maternal mortality rate in 2012 was 49.1, almost seven points higher than in 2000. Moreover, the trend of this indicator is volatile; thus, its lowest value was observed in 2001 (43.8 per 100,000 live births) and its highest value was observed in 2009 (63.5 per 100,000 live births), while the maternal mortality indicator rarely fell below 50 per 100,000 live births during the observed period.

FIGURE 1. **MATERNAL MORTALITY IN THE KYRGYZ REPUBLIC PER 100,000 LIVE BIRTHS**



Source: National Statistical Committee

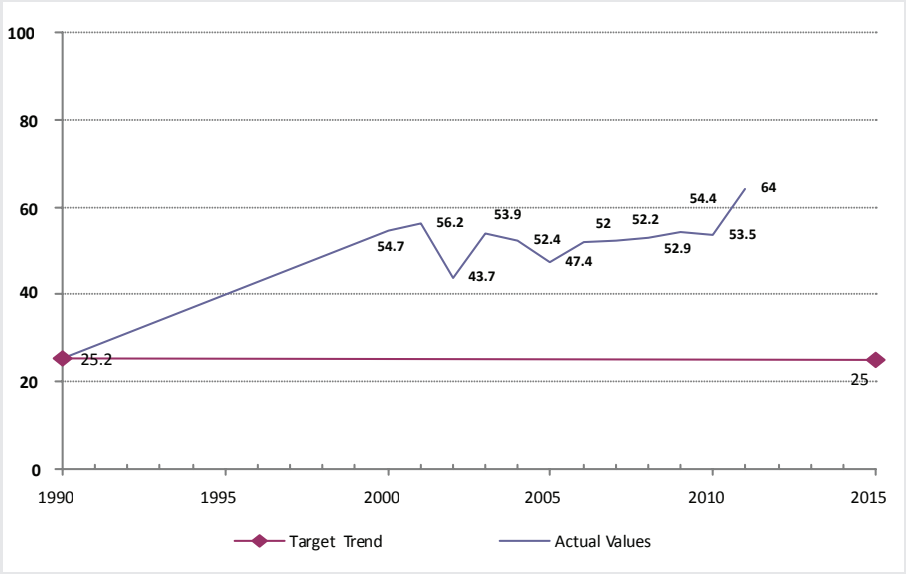
According to official statistics, the indicator for the ratio of pregnant women with anemia (Figure 2) has steadily deteriorated since 2005. The year 2011 marks the peak of this value, when the percentage of pregnant women with anemia was 64 percent – almost 10 percent more than in 2000. In order to reach the set target, the reduction rate must be more than 2.5 times faster per year. The indirect indicator of the anemia rate in pregnant women is the same indicator in non-pregnant mothers of children of early age. According to data in the study,[11] the incidence of anemia among non-pregnant mothers of children under 5 years of age was

10. It is essential to note that the progress is assessed on the basis on data from the National Statistical Committee of the Kyrgyz Republic. There is a certain discrepancy between its data and data from the Ministry of Health. The reasons for this are explored later in this report.

11. National study of the nutritional status of children 6-59 months of age and their mothers, 2009, MH, NSC, UNICEF, CDC and KSSHP.

23 percent and the incidence of iron deficiency anemia was 23.0 percent. At the same time, the incidence of anemia and iron-deficiency anemia appeared to be higher in rural settings (25.5 percent) than in urban settings (18 percent). The specified trends represent a problem of moderate significance for public health (according to WHO's classification of anemia).

FIGURE 2. **RATIO OF PREGNANT WOMEN WITH ANEMIA (%)**



Source: National Statistical Committee

A relatively stable situation was noted with regard to the indicator for the proportion of births attended by skilled personnel, which is around 98 percent; all births attended by health workers fall under "the proportion of births attended by skilled personnel" as per this indicator. However, some factors discredit the quality of services delivered by the personnel at births. According to some studies,[12] among 20 percent of the poorest population, 7 percent of women did not receive qualified assistance during labour. Moreover, according to RMIC, the number of births attended outside of the health facilities for 2012 was 1,713, i.e., 1.2 percent of all births. The number of births in 50 FGPs and FAPs with maternity beds for 2012 was 1,002 (0.8 percent). More than 90 percent of FGP and FAP buildings are not inadequately heated, which poses significant challenges during the winter. In addition, these primary health facilities face a chronic shortage of equipment, medicine and medical items and struggle with inadequate infection control; moreover, because

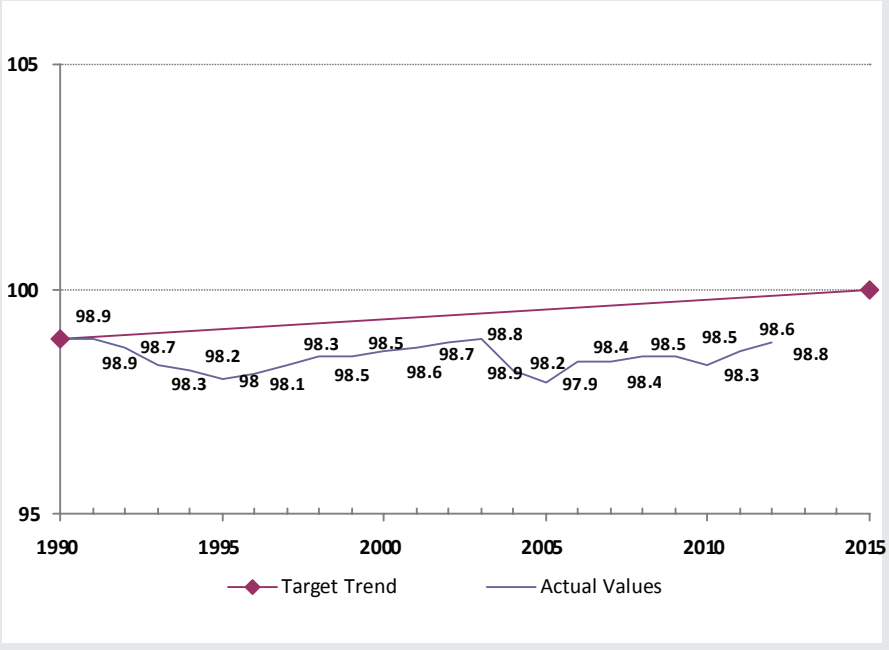
12. MICS - 2006

not enough hospital attendants are on duty,[13] there is no round-the-clock provision of service during the three-day post-delivery period prior to the discharge of new mothers. In addition, 38 percent of obstetrics hospitals have not yet adopted standards for effective perinatal care, thus generating concerns about the available care provided by skilled personnel to parturients.

Thus, an independent study is necessary in order to obtain a reliable evaluation of this indicator.

As noted, a new target benchmark for Objective 2 of MDG 5 was adopted in 2012. The *Den Sooluk* Programme aims to increase by 10 percent the coverage of women of reproductive age using modern methods of family planning by 2016. Figure 4 presents data on the actual and target trends with regard to the percentage of women of reproductive age who use contraceptives. The reported rate of 2011 was adopted as the baseline indicator. The estimation of the target value for 2015 is based on the target benchmark of 2016 of the *Den Sooluk* Programme, taking into account the estimated average annual growth rate. This indicator has suffered in recent years due to financing bottlenecks and insufficiently funded programmes for the purchase of contraceptives.

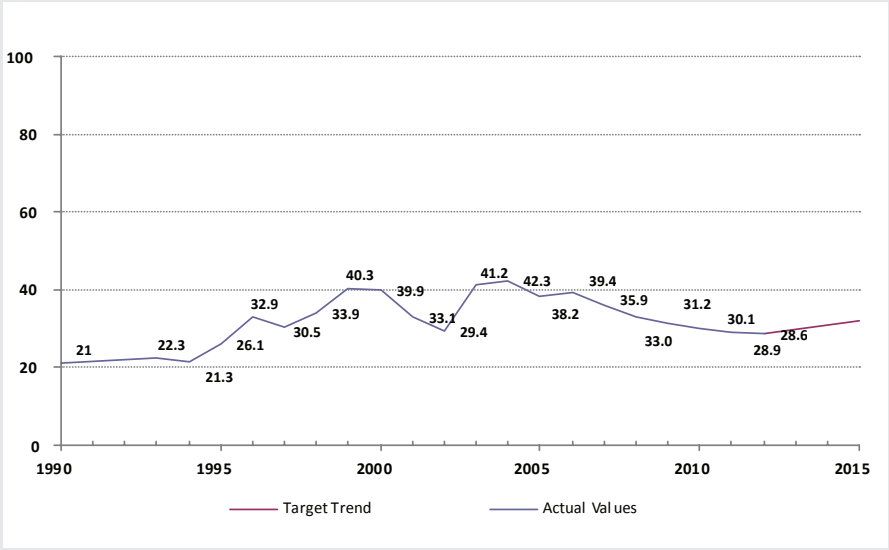
FIGURE 3. **RATIO OF BIRTHS ATTENDED BY SKILLED HEALTH PERSONNEL (%)**



Source: National Statistical Committee

13. Current Context of Rapid Assessment Review in FGPs and FAPs wit maternity beds, July 2012, The Association of Hospitals KR, UNICEF.

FIGURE 4. **RATIO OF WOMEN OF REPRODUCTIVE AGE USING CONTRACEPTIVES (%)**



Source: National Statistical Committee

2.2. CURRENT CONTEXT AND MATERNAL MORTALITY TRENDS

The maternal mortality rate is the key indicator of the progress toward MDG 5, as it shows the extent of maternal health care in the country. The child birth rate critically affects the maternal mortality indicator, as a growing number of births increases the likelihood of maternal deaths, whereas other adverse factors remain unchanged. The changes in the population of the Kyrgyz Republic are greatly impacted by the natural growth of the population, which develops based on variations in fertility and mortality. Since 2001, there has been a steady growth in the birth rate. The natural population growth trend continues to grow – 20.6 per 1,000 people in 2012 (compared to 20.2 in 2010) – while the total birth rate in 2011 was 27.1 per 1,000 people, which, on average, is higher than the rate in neighbouring countries.[14]

The fertility rate trend is associated with an increased contribution to the birth rate of the first child in succession. Thus, the first-born children constituted 34.6 percent of all children born in 2000 and 39.3 percent in 2011. The average age of mothers at first birth was 23.4 years.

14. 2010 – 26.8; CIS – 14.7; RF – 12.4; RK – 22.4 (RMIC data).

The steady growth in the fertility rate is associated with the increase in recent years of the number of women who have reached child-bearing age (including girls born in the wake of the baby boom in mid-1980s) and who are at the most conducive age for child-bearing (i.e., 20 to 29 years old, the age bracket in which more than 65 percent of children are born each year). In recent years, the fertility index of women has been on the rise, reaching 3.09 children, according to data from 2011. According to the NSC, the highest fertility rate for 2011 was within the group aged 20 to 24 years (an average of 185.9 per 1,000 women of this age, including 133.7 urban and 224.2 rural) and within the group aged 25 to 29 years (176 per 1,000 women of this age, including 158.2 urban and 186.7 rural).

In the Kyrgyz Republic, the process of registering and tracking progress toward reducing maternal mortality has a longstanding history. To identify and record all cases of maternal mortality is not easy; therefore, accurate analysis of the trend is quite challenging. There are discrepancies between the official statistical data provided by the NSC and those of the Ministry of Health. The major causes that lead to discrepancies between the data of the NSC and the Ministry of Health on the number of deaths during gestation, labour and puerperium are:

- Untimely registration of deceased women during gestation, parturient and puerperant at ZAGS offices by relatives of the deceased woman
- Improper filling of Medical Certificate of Death by health professionals (lack of records on gestation of a deceased woman, in particular, in cases of deaths due to other causes – often classified as 'accidental death')
- Lack of identification documents for the deceased woman when, in such cases, ZAGS offices decline registration of the death
- According to the NSC, the data on all deceased women registered with ZAGS offices are recorded in the reporting year (regardless of the date of death) and the Ministry of Health (MH) data include only the information on maternal mortality cases that occurred in the reporting year (period).[15]
- The registration of maternal mortality cases by place of residence instead of by place of death also hampers the review of maternal mortality data and planning interventions to build the capacity of health workers.

The maternal mortality rates shown on Table 1 and provided by the Ministry of Health indicate some discrepancies with data from the NSC. Specifically, the data from the Ministry of Health in the last two years are slightly higher than the data provided by the NSC. In addition, the Ministry of Health's statistics show a lower mortality rate compared to the data of international studies (110 per 100,000 live births in 2000, then 150 in 2005 and 104 in 2006 - Multiple Indicator Cluster Surveys, WHO, DHS, UNICEF MICS[16]). At the same time, these same parameters were 46.5 in 2000, 61 in 2005 and 53 in 2006, according to the Ministry of Health.

15. According to the Order of Ministry of Health 'On Improving the entirety of registration, timely notification of relevant authorities on maternal death cases and reliability of the maternal mortality indicator', information on maternal deaths should be reported to the Ministry of Health and MIS MCH NC by phone within one day, emergency notification on maternal deaths should be made within three days, and documentation should be submitted at MIS MCH NC within 10 days. However, in 2011, of 70 cases of maternal death in 23 cases (32.9 percent), the information was reported with a delay of seven days up to one month.
16. Sources of data used: Regional WHO Office database (http://data.euro.who.int/hfadb/), WHO core database on health indicators (http://www.who.int/whosis/database/core/core_select.cfm), Maternal Mortality Estimates by WHO, UNICEF, UNFPA, WB, 2005, Multiple Indicator Cluster Surveys of UNICEF and MH KR, 2006

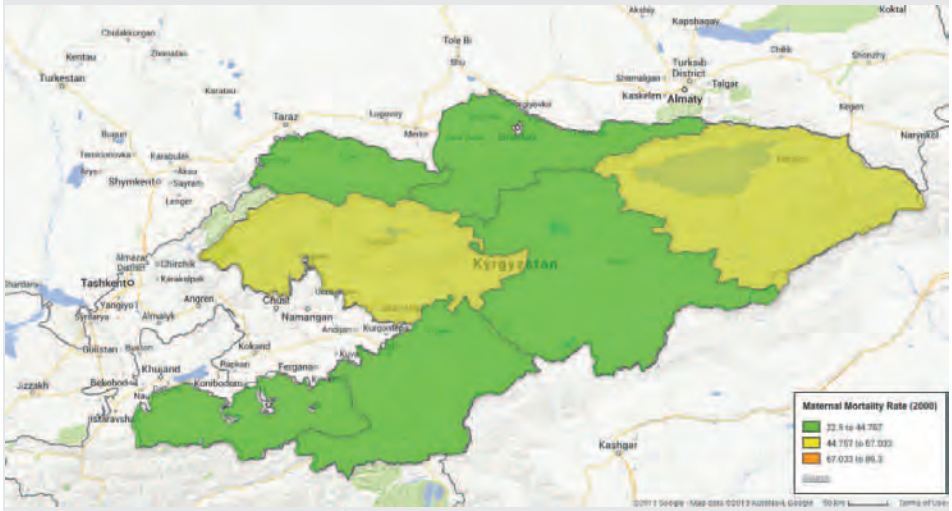
The maternal mortality rate in almost all regions of the country is also inconsistent with significant variations over the years. In 2000, the situation in Issyk-Kul oblast (59.9) and Jalalabad oblast (48.6) and the city of Bishkek (99.7) was alarming. In subsequent years, the situation in certain regions has improved, but remains particularly inconsistent in regions with poor socio-economic development, particularly in Naryn oblast, Talas oblast (especially from 2002 to 2005, although there were improvements in 2011) and Issyk-Kul oblast (high figures since 2005). According to data from 2011, the maternal mortality rate in Naryn oblast (70.3) and Issyk-Kul oblast (88.3) was almost 1.5 to 2 times higher than the national average.[17]

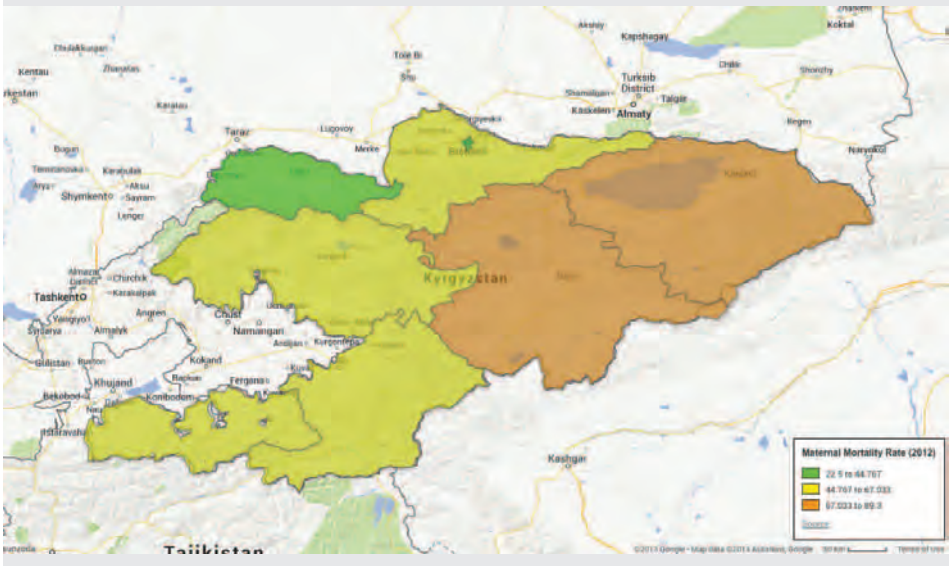
According to the NSC, the MMR was prevalent among the urban population until 2000, although this is probably due to the underreporting of MMR in rural areas. Since 2000, the ratio is shifting: there has been a decline in MMR among urban women from 60.3 in 2000 to 32.1 in 2010; at the same time, there has been a significant increase in MMR among rural women from 39.4 in 2010 to 61.3 in 2010. According to 2010 data, the MMR among rural women across Kyrgyzstan in general is 1.9 times higher than that of women living in urban areas.

Most maternal deaths – 64.3 percent (45 cases) – occurred in the maternity wards/clinics and post-natal wards. In 2012, nine pregnant and post-partum women with extra-genital pathology died in non-obstetrics hospitals, four - during emergency surgeries, and five deaths due to somatic symptoms (versus 20 cases in 2011 and 15 cases in 2010). The number of births involving any type of complications has significantly increased. Currently, physiological (normal) labour accounts for only 60 percent of all births in the country,[18] whereas the remaining 40 percent register complications during pregnancy and birth, including hemorrhage, sepsis, venous disorders, hypertensive complications, labour abnormalities, abnormal presentation, placenta praevia, etc.

17. The analysis of maternal mortality for 2010-2011 in different regions and in different years did not show a clear trend by regional peculiarities and causes.
18. Data of the Republican Medical Information Centre of Ministry of Health of the Kyrgyz Republic.

MAP 1. **MATERNAL MORTALITY DISAGGREGATED BY REGIONS OF THE KYRGYZ REPUBLIC PER 100,000 LIVE BIRTHS**





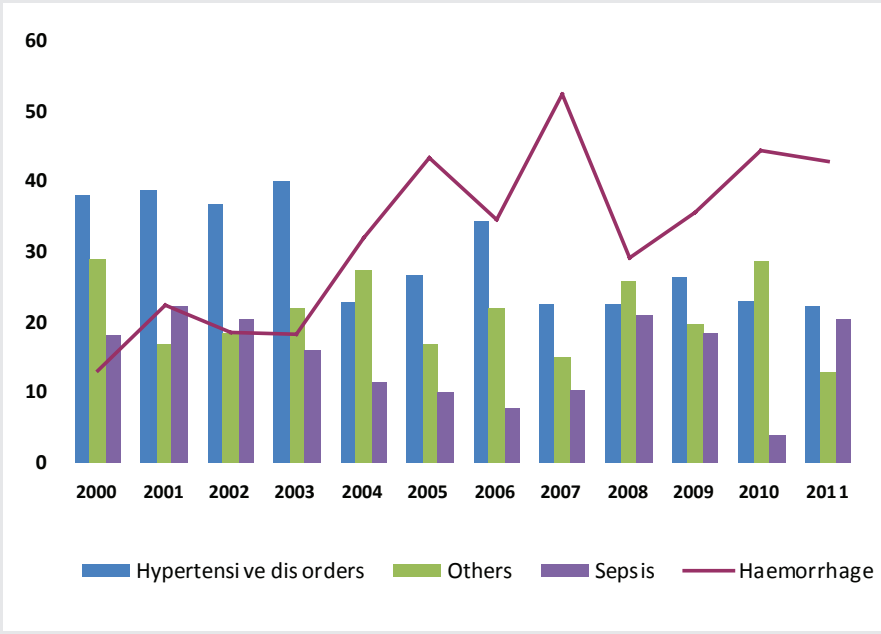
Source: Republican Medical Information Centre of the Ministry of Health of the Kyrgyz Republic

2.3. MAJOR HEALTH CAUSES OF MATERNAL DEATH

Women are dying due to numerous direct and indirect causes during gestation, labour and the post-partum period. About 80 percent of maternal deaths occur due to direct causes (i.e., obstetric causes). The four major causes include post-partum hemorrhage, hypertensive disorders, post-partum infections (mainly sepsis) and obstructed labour. The indirect causes (20 percent) of maternal death include diseases that complicate gestation or are aggravated by pregnancy, such as TB, pneumonia and pleuritis, acute hepatitis, cardiovascular diseases and cardiac malformation, and HIV/AIDS.

The structure of causes of maternal mortality associated with pregnancy in recent years has changed (see Figure 5). Among the causes in 2011, hemorrhage (42.6 percent) and hypertensive disorders (22.2 percent) ranked highest and the proportion of septic complications in 2011 rose to 20.4 percent. Other causes in the structure of deaths in 2011 amounted to 12.9 percent (anaphylactic shock, thromboembolia, amniotic fluid embolism, uterine rupture, anesthesia complications).

FIGURE 5. **MAJOR HEALTH-RELATED CAUSES OF DEATH (%)**



Source: Republican Medical Information Centre

In the long run, the trend of post-partum bleeding has increased vis-à-vis other causes and is the most common complication leading to death. These complications require immediate delivery of proper obstetric aid, including the administration of essential drugs, antibiotics, solutions for transfusion, Caesarean section and other surgical procedures to arrest hemorrhage. Effective perinatal technologies,[19] the system for monitoring, and in-service training are not being implemented in 38 percent of all obstetrics facilities; meanwhile, managers are not motivated to implement effective technologies and clinical protocols, public awareness-raising activities are poorly implemented, and the programme for family preparation for childbirth is not being implemented in all facilities. Emergency obstetric care is delivered poorly. Obstetricians, gynecologists, anesthetists and intensive care professionals have no common approach to deliver care to pregnant women with severe pre-eclampsia/eclampsia.

As shown in Figure 5, deaths from hypertensive disorders have decreased over the last decade: thus, the percentage ratio of hypertensive disorders was 38 percent in 2000 and 22.2 percent in 2011. This is due to effective diagnostic interventions of hypertensive disorders (magnesia therapy, early and timely delivery in severe preeclampsia/eclampsia, reduced poly-pharmacy) on the one hand and a more thorough review of the causes of maternal mortality on the other (identification of immediate causes of hemorrhage in case of hypertensive disorders).

In addition, a high percentage ratio among the causes of maternal deaths is due to septic complications, while its trend is volatile. Thus, the percentage ratio of septic complications in the structure of leading causes of maternal death was 18 percent in 2000; in 2010, the observed effect of septic complications was the lowest (3.8 percent), while, in 2011, the figure was 20.4 percent. The increase in septic complications is affected by poor infection control in health care facilities: poor quality of disinfection and sterilization of used instruments, improper disposal of medical waste, interruptions in clean water supply, lack of rooms to wash hands in some hospitals, poor training and monitoring of proper hand washing techniques, improper use of gloves, delayed antibiotic prescription in pre-term rupture of fetal membranes, and pre-operative antibiotic prevention in Caesarean section. According to recommendations to combine basic and integrated emergency obstetric care for every half million people, it is necessary to have "at least five health care facilities for delivery of emergency obstetrics care, including, at least, one health care facility capable to provide integrated emergency care".[20]

BOX 1. **THE QUALITY OF PRENATAL CARE: OPINION**

Managers sometimes show quite limited knowledge of clinical issues, even basic ones such as hospital, nosocomial infections. The chief obstetrician-gynecologist, for example, said, "We should not be too obsessed with washing hands." Indeed, there is a growing incidence of infections among the public and it is not surprising that women, after being admitted to hospitals, routinely develop septic complications.

Source: Assessment of the quality of inpatient care to mothers and newborns, antenatal and postnatal care at PHC level (WHO, UNFPA, UNICEF, 2012).

19. Data of AMS of MH KR
20. WHO, UNICEF, UNFPA and Columbia University, Monitoring emergency obstetric care, 2009.

The antenatal period plays a crucial role in the prevention of maternal death, i.e., this is the period during which intrauterine fetal development commences from the time of zygote formation until the delivery. An arrangement of the antenatal care system (prenatal care) that incorporates services provided to a pregnant woman to protect her health and the health of the unborn child, providing all necessary assistance to her partner or her family for a smooth and coherent transition to parenthood, is quite critical.

Antenatal care provides for the prevention, early detection and treatment of diseases of a mother and a fetus. The education of women to help them to properly prepare for childbirth and to promote confidence in the medical staff (midwife/paramedic) plays a crucial role. Proper quality health services and the taking of tests during the antenatal period contribute to the early detection and the prevention of the signs and symptoms of diseases or abnormalities, which will enable the mother to seek appropriate care. In 2011, the indicator of deceased women whose pregnancy was not monitored at health care facilities increased to 30.0 percent, versus 24.7 percent in 2010.[21] According to data from the last five years, of those died, an average of 30 percent were not monitored at health care facilities (2008 – 22.7 percent, 2009 - 36.2 percent, 2010 - 25.7 percent, 2011 – 29.5 percent, 2012 - 13.5 percent). In addition, in more than half of cases of maternal mortality, the diagnoses were not validated by pathologic anatomical autopsies.

However, the extent of pregnant women covered by antenatal care in Kyrgyzstan has always been quite high: the national average is 96.9 percent,[22] with the indicators disaggregated regions from 92.7 to 99.4 percent.[23] Nonetheless, the content and quality of pregnancy monitoring requires significant improvement. The poor quality of antenatal care is associated with the lack of a range of antenatal care services available to pregnant women with different pathologies. This is particularly true for rural areas. The causes include a lack of criteria for timely referral of a patient to a respective sub-specialist or health care facility, a lack of regular monitoring of compliance of antenatal care with clinical protocols, a high turnover rate, and a lack of incentives among health care workers that would encourage better performance. In some remote areas, FAPs and FGPs are equipped with hospital obstetric beds. However, these facilities do not have appropriate obstetric equipment and trained personnel, which makes it impossible to ensure safe delivery. The above-mentioned study, conducted with the support of UNICEF (Maternal and Newborn Health in Kyrgyzstan and Chui Oblast: Assessment and Justification of Interventions. Bishkek, 2009), indicates that, given the universal coverage by effective interventions in primary health care, facilities could prevent 62.2 percent of all deaths.

2.4. CURRENT CONTEXT AND REPRODUCTIVE HEALTH CARE TRENDS

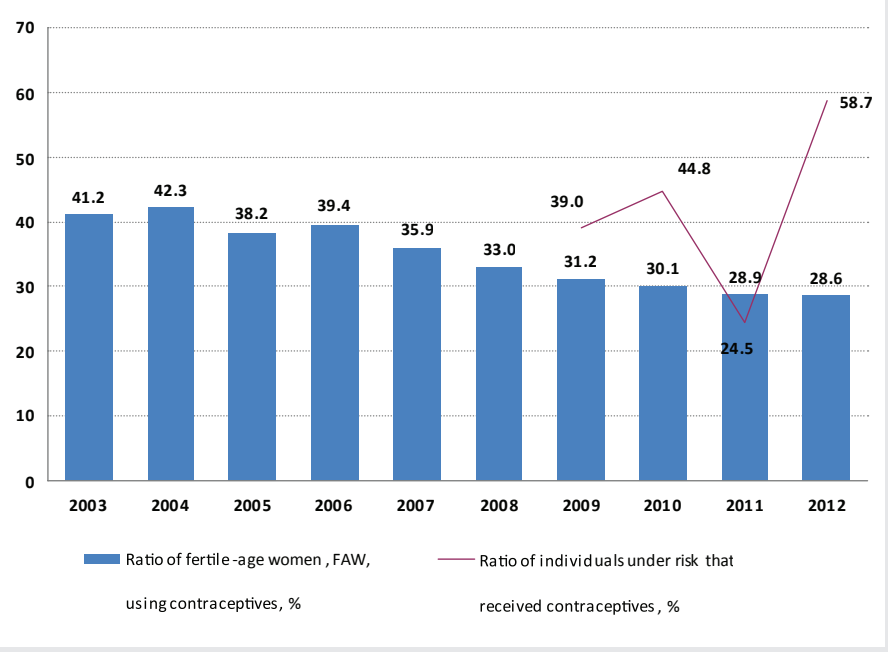
As mentioned in the introduction, the intersectoral National Reproductive Health Strategy of the Kyrgyz Republic for 2006 to 2015 is under implementation, which underscores the need to improve access to reproductive

21. RMIC data.
22. Multiple Indicators Cluster Survey, 2006, National Statistics Committee of KR and UNICEF.
23. Maternal and Newborn Health in Kyrgyzstan and Chui oblast: Assessment and Justification of Interventions. Bishkek, 2009.

health care, yet does not set target benchmarks with regard to Objective 2 of MDG 5 (To ensure universal access to reproductive health care by 2015). In part, that is covered in the Den Sooluk Programme. However, given the importance of reproductive health for the nation, this report describes the main trends associated with generally accepted international indicators of reproductive health.

With respect to coverage of contraceptives, the Kyrgyz Republic has wide coverage of contraceptives, mainly due to donor supplies, which leads to decreased cases of unwanted pregnancies, abortions or births. Nonetheless, the lack of a system safeguarding supplies of contraceptives and limited resources prevent their procurement and make the country reliant on supplies from donors, namely, UNFPA, USAID and GFATM.

FIGURE 6. **KEY INDICATORS OF USING CONTRACEPTIVES AMONG REPRODUCTIVE AGE WOMEN (%)**



Source: Republican Medical Information Centre

According to Figure 6, the donor supplies currently in the country have decreased, which requires immediate action (the proportion of women of fertile age using contraceptives was 41.2 percent in 2003 and 28.9 percent in 2011).[24] Nevertheless, the highest rate of coverage of women of fertile age using contraceptives versus the national indicators is recorded in Issyk-Kul oblast (35.2 percent) and Talas oblast (32.9) and the lowest levels of coverage are reported in Batken oblast (17.9 percent) and Jalalabad oblast (22.8 percent).

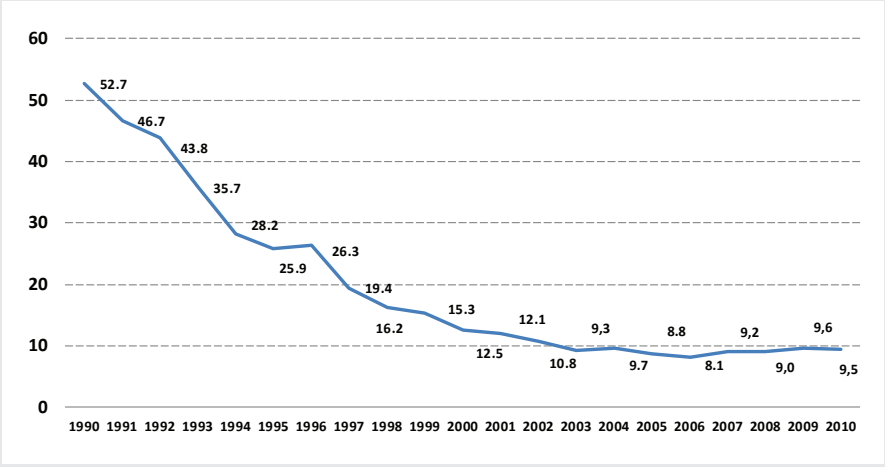
Since 2006, with the support from UNFPA, the contraceptives logistics management information system (LMIS) was introduced at the national level and, at the RMIC, the Country Commodity Manager (CCM) software was installed, which enables access to updated information on stocks of contraceptives across the country (monthly, quarterly, semi-annually, annually), the forecasting and identification of remaining or short supplies, and thus justified requests for subsequent deliveries. This CCM enables the projection of supplies based on average needs of contraceptives as per their maximum and minimum stocks for six to 12 months. According to demographic CCM programme data, the coverage of contraceptives in the Kyrgyz Republic is insufficient and their supplies in the country can cover only a small percentage of the population. In recent years, mainly the UNFPA and partly the Global Fund have ensured supplies of contraceptives. In line with declining donor supplies of contraceptives, the development of recommendations and a mechanism are under development to ensure smooth transition from humanitarian supplies of contraceptives to public procurement to meet at least 20 percent of the needs of women belonging to low-income and vulnerable groups of the population. At the same time, the competent use of contraception allows couples to plan the birth of their first child after they have gained education and positioned themselves in labour market; to decide on the right span between births so that the increasing economic burden on the family is properly spread; and to monitor maternal reproductive health so that women can give birth to healthy children without costly interventions such as the treatment of infertility or in vitro fertilization. According to data from the study of the economic dimensions of contraception, every dollar invested by the government in family planning allows savings up to US$6 in health care by preventing unintended pregnancies, abortions and miscarriages.[25]

In view of the reduced coverage of contraceptives, the issue of abortion in the Kyrgyz Republic has gained particular importance. Thus, according to reported data, seven of 10 pregnancies end up in abortion,[26] whereas, according to the RMIC, the abortion rate in 2011 was 10.3 per 1,000 women aged 15 to 49 years (see Figure 7), with the highest rate on this indicator being in Bishkek oblast (12.9) and Chui oblast (12.0) and the lowest rate being in Jalalabad oblast (5.3) and Osh oblast (5.6).

Although there is a high rate of post-abortion complications, the indicator of maternal death due to abortions and ectopic pregnancy has slightly declined (15.6 percent, or seven cases in 2000; 2.1 percent, or three cases in 2011, according to the RMIC). While maternal mortality in 2009 due to pregnancy termination in 40 percent of cases was associated with elective abortions after up to 12 weeks of gestation and with spontaneous miscarriages, it was due in 20 percent of cases to pregnancy termination according to medical indications. In 2010, the major proportion (80 percent) of maternal mortality owing to abortions

24. Data of the RMIC.
25. Smith R., Gribble J. Family Planning Saves lives. Population Reference Bureau, 2009.
26. Kerimova N.R. Report on Identification of Actual Incidence of Abortions in Kyrgyzstan, 2004.

FIGURE 7. **INDICATOR OF ABORTIONS PER 1,000 OF WOMEN OF REPRODUCTIVE AGE**



Source: Republican Medical Information Centre

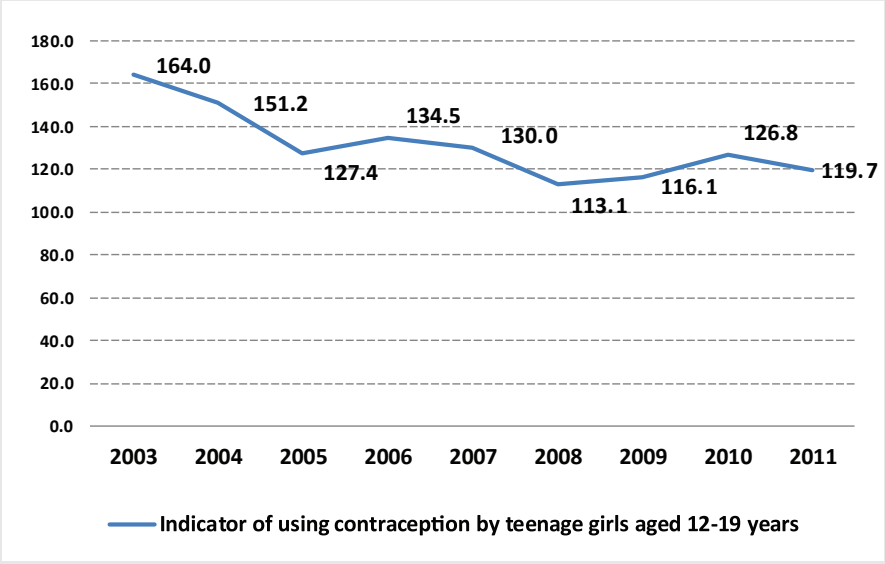
qualifies for mortality due to medically indicated abortions and due to spontaneous miscarriages in 20 percent of cases. In 2010, the cases of maternal mortality associated with elective abortions were not registered at all, and in 2011, three cases were reported.[27] However, most facilities that provide abortions conduct them with no proper registration in private and public clinics. According to WHO guidelines,[28] 99 percent of all induced abortions are not included in the reports, disguising them as other procedures or classifying them as spontaneous abortions that occur in public hospitals. In the Kyrgyz Republic, the traditional method of instrumental curettage of the uterine cavity persists. This method is more invasive and risky compared to vacuum aspiration or drug-induced abortion, which are the methods that WHO has recommended for many years. According to the conducted evaluation,[29] the selection of abortion method in public health facilities is limited due to the lack of skills for conducting safe abortion, necessary equipment and medicine. The lack of clinical protocol is also hampering the nationwide introduction of drug-induced termination of pregnancy.

As regards the use of contraceptives by adolescents in recent years, there has been a decline in the use of contraceptives among teenaged girls aged 12 to 19 years per 1,000 girls (See Figure 8). Thus, in 2003,[30] this indicator was 164 and decreased to 119.7 in 2011. In addition to the challenges of teenage pregnancy, pregnant teenage girls undergo mainly invasive abortions

27. Strategic Assessment of Contraception and Abortions-Related Policy, Programmes and Services, 2011, WHO
28. The Reproductive Health Challenges – Volume 15, Ref. No.30, November 2007.
29. Strategic Assessment of Contraception and Abortions-Related Policies, Programmes and Services, WHO, UNFPA, 2011.
30. Electronic data collection at RMIC on usage of contraceptive agents by teenaged girls aged 12 to 19 years has been implemented since 2003.

(instrumental curettage), while childbearing in adolescence causes serious implications to the health of a girl and her child. According to official statistics from the RMIC, the incidence of abortion among teenagers aged 12 to 19 years in 2011 was 1,425 (i.e., 3.3 per 1,000 of girls of this age group), but was 1,115 in 2006 (2.7 per 1,000 of girls of this age group).

FIGURE 8. **CONTRACEPTIVE USAGE BY GIRLS AGED 12-19 YEARS, PER 1,000 GIRLS**

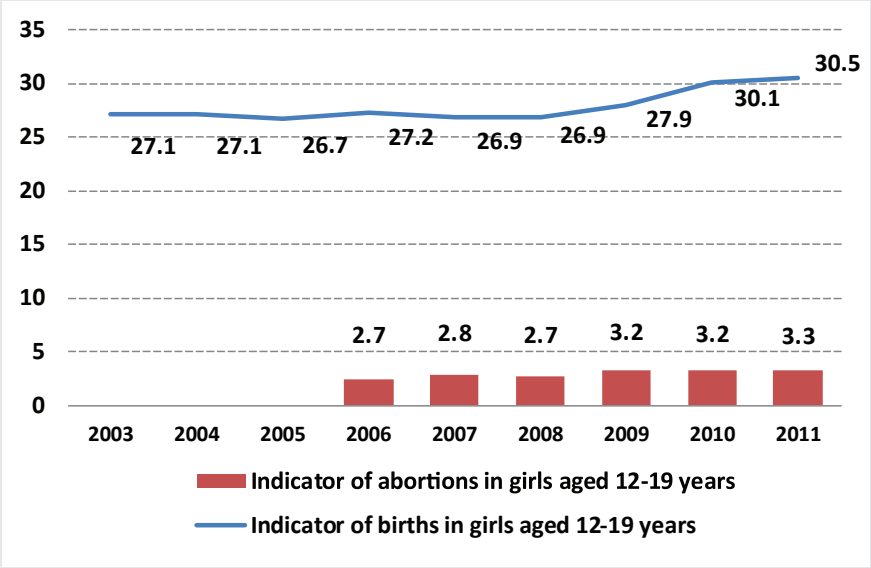


Source: Republican Medical Information Centre

The increased incidence of adolescent pregnancy and births in the Kyrgyz Republic to 13,516 in 2011 (30.5/1,000), 13,476 in 2010 (31.1/1,000) and 11,039 in 2006 (27.2/1,000) testifies to increased sexual activity of teenage girls, little awareness and limited access to abortions and contraceptives.[32]

32. Regrettably, data disaggregated by regions are not collected. Also, the data on pregnancy of unwed or wed mothers are not collected. Abortions are not officially recognized as a method of contraception or regulation of fertility in the country, even though unofficially, this is a prevalent method for controlling fertility among many women.

FIGURE 9. **INDICATOR OF BIRTHS AND ABORTIONS IN GIRLS AGED 12-19 YEARS, PER 1,000 OF GIRLS OF RESPECTIVE AGE**



Source: Republican Medical Information Centre

2.5. ECONOMIC, SOCIAL, CULTURAL AND OTHER FACTORS

Complications that lead to maternal deaths are caused by a range of economic, social and cultural factors, the condition of public health, demographic structure, behavioural patterns, etc. It is well known that maternal mortality is one of the most sensitive indicators determining the poverty rate and degree of socio-economic and human development.

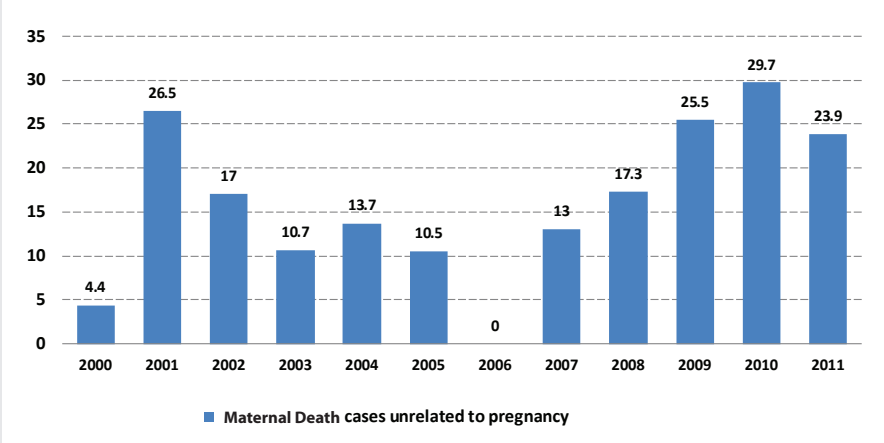
According to Figure 10, the proportion of maternal deaths unrelated to pregnancy in 2011 was 23.9 percent of all cases. Prior to 2006, the percentage ratio of maternal deaths unrelated to pregnancy decreased. However, since 2006, the non-medical causes are increasingly affecting maternal mortality. The major diseases that complicate pregnancy and lead to maternal deaths include tuberculosis, pneumonia and pleuritis, acute hepatitis and cardiac malformation.[33] Furthermore, these diseases can be caused by current economic conditions in the country and are mostly prevalent among the risk groups. Thus, the increased incidence of maternal death due to pneumonia and pleuritis in 2009

33. RMIC data.

(from four cases in 2008 to 12 cases in 2009) can be partially attributed to the epidemic of avian influenza, the 'rolling' electricity blackouts and insufficient heating in houses and health facilities. Maternal deaths due to tuberculosis (an average of four cases per year) are attributed to the deteriorated socio-economic status of the population and the lack of awareness among women of possible threats to pregnancy in case of such a disease. Maternal mortality caused by acute hepatitis (approximately five cases per year) is mostly associated with poor access to clean potable water and insufficient knowledge among the general population and pregnant women about sanitation and hygiene.

In addition to these factors that cause complications in pregnancy, many others substantially impact gestation and successful deliveries. As mentioned above, public awareness, especially in rural areas, of methods of family planning, reproductive health, safe contraception, danger signs of pregnancy, and the timely seeking of medical care plays a critical role. Low public awareness about family planning methods leads to poorer birth spacing. Poor awareness, education and communication among pregnant women and mothers, a lack of information among family members about dietary particulars and the danger signs of pregnancy, and insufficient proper rest and preparation for childbirth may lead to increased complications during pregnancy. In addition, gaps in the standards and in the delivery of sex education among school students, adolescents and youth lead to widespread early marriage and refusal of the use of contraceptives due to religious reasons, which leads to pregnancy and childbirth at a relatively early age, especially in rural areas.

FIGURE 10. **RATIO OF MATERNAL DEATH CASES UNRELATED TO PREGNANCY (% OF ALL CASES)**



Source: Republican Medical Information Centre

BOX 2. **DEMAND FOR THE QUALITY PRENATAL CARE: OPINION**

In most cases, family nurses do not deliver routine examinations of pregnant women or mothers (i.e., measuring blood pressure, discussing issues related to her health and family planning, etc.). The following quote from a conversation between a nurse and a pregnant woman underlines this issue: "The only recommendation is to visit the gynecologist in case of emergencies." Women would like to have better access and a wider variety of choices, but this depends on where they live. They request fewer ultrasound procedures and other tests and fewer expensive medicines (all of which is paid out of pocket). Most respondents would like to have better information, education, and communication in all areas using diverse tools, approaches and resources not only for pregnant women and mothers, but also for the general public: from school students up to men and elderly people, in particular, to mothers-in-law, who can make help change the behaviour model so that pregnant women pay due attention to their health and seek timely health care.

Source: Assessment of quality of inpatient care to mothers and newborns, antenatal and postnatal care at PHCs (WHO, UNFPA, UNICEF, 2012).

In addition, the health of women pre- and during gestation is a crucial factor affecting pregnancy outcomes and encompasses nutrition, social status, etc. Poor nutrition among women and iron deficiency anaemia in pregnant women increase the risk of maternal death in childbirth and can lead to approximately 20 percent of maternal deaths.[34] According to official data from 2011, 46.9 percent of women with monitored pregnancy were suffering from anemia. The highest rate was reported in Batken oblast, where 74.6 percent of women with monitored pregnancy were anemic in 2011. In eight of 74 pregnant women who died in 2011, severe anemia was observed (10.3 percent, according to the RMIC).

Table 2 shows that the quality of nutrition deteriorated among the general public between 1990 and 2011. The consumption of meat and meat products fell by more than half, while the consumption of milk and dairy products in 2011 was only one third of the 1990 benchmark. Furthermore, the consumption of fruits and berries decreased by 20 percent and the consumption of fish and fish products was only about 25 percent of the 1990 benchmark. Only about 60 percent of pregnant women received iron and folic acid supplements through antenatal care services.[35]

34. Maternal and Child Under Nutrition: Global and Regional Exposures and Health Consequences. Lancet 2008: V 371: 243-60.
35. Ibid.

TABLE 2. **CONSUMPTION OF FOOD PRODUCTS PER CAPITA (KG/MONTH), 1990-2011**

Indicators Titles	1990	2005	2006	2007	2008	2009	2010	2011
Bread and cereal products	10.7	9.9	10.7	10.4	10.8	0.8	10.6	10.5
Potatoes	5.1	4.0	3.8	3.7	4.1	4.2	4.0	3.92
Vegetables and gourds	7.2	6.5	6.9	6.4	7.0	5.6	7.0	6.68
Fruits and berries	2.8	1.3	2.0	1.9	2.0	2.5	2.1	2.24
Meat and meat products	3.5	1.2	1.4	1.4	1.6	1.7	1.7	1.67
Milk and dairy products	20.1	6.9	7.3	6.7	6.8	7.0	7.5	6.93
Vegetable oil and other fats	0.8	0.9	0.9	0.9	0.9	1.0	1.0	0.94
Sugar, confectionery products equivalent to sugar content	1.6	1.2	1.2	1.2	1.3	1.3	1.3	1.24
Eggs	13.2	4.2	4.6	4.4	4.5	4.9	5.2	5.05
Fish and fish products	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.09

Source: Republican Medical Information Centre of the Ministry of Health of the Kyrgyz Republic

Improvement of the nutritional status of pregnant women requires further fortification of the diet of pregnant women through nutritional supplements containing either iron and folic acid or complex of micronutrients, and the promotion of efforts to further fortify food (iodized salt and fortified flour, enriched with vitamins and minerals) which will substantially contribute to achievement of the MDG in Kyrgyzstan.[36]

The low standard of living, especially in rural areas, affects pregnant women's access to health services. Furthermore, when gainfully employed, women earn only two thirds as much as men; in addition, they have housekeeping and family responsibilities. Moreover, the hard manual labour that many pregnant women perform harms the health of mother and fetus alike.

The number of deceased women (during pregnancy or child birth) among internal labour migrants to other regions in the country significantly increased in Bishkek and Chui oblasts, oblast centres, and outside the country (a total of 10 cases were registered in 2008 and 12 cases in 2011, according to RMIC). Often, health staff can no longer monitor pregnant women, who are then admitted to or treated at a primary health care facility in such serious condition that physicians can no longer help. Moreover, there are cases of bad working conditions for pregnant women, and no entitlement to fully paid maternity leave. According to data from three recent years, an average of approximately 73 percent of those died were unemployed (2010 – 82.4 percent; 2011 – 71.8 percent; 2012 – 64.9 percent) and migrants comprised 17 percent of those who died (2010 – 14.9 percent; 2011 – 16.9 percent; 2012 – 18.9 percent). Altogether, these figures comprised 90 percent of maternal mortality cases.

36. Improving Economic Outcomes by Expanding Nutrition Programming in Kyrgyzstan (World Bank/UNICEF, 2009).

The indicator of deceased women in national, or republican, health care facilities increased from 12.7 percent in 2010 to 18.5 percent in 2011. Women temporarily residing in Bishkek or without a residence permit are admitted to these national health care facilities. These women often arrived in critical conditions, without regular prenatal cares, or on their own and without a referral to the hospital. Most maternal deaths occur in territorial hospitals. The decline in the percentage ratio of maternal deaths in maternity units under oblast health care facilities (36.6 in 2010 to 27.7 in 2011) testifies to insufficient regionalization, i.e. the death of mothers occur at territorial hospitals where the specialized and skilled care is delivered not in a full scope.

TABLE 3. **MATERNAL MORTALITY BY PLACE OF DEATH, RELATIVE PROPORTION OF NUMBER OF CASES (%)**

	2006	2007	2008	2009	2010	2011	2012
Republican facilities	10.8	19.2	16.0	5.9	16.2	15.5	12.2
Oblast merged hospitals	21.5	25.6	25.3	31.4	20.3	25.4	28.4
Rayon and city territorial hospitals	47.7	29.5	38.7	36.3	32.4	35.2	36.5
DH, FAP	6.2	2.6	1.3	2.9	5.4	1.4	4.1
Other hospitals	3.1	3.8	8.0	2.9	9.5	5.6	5.4
Osh city perinatal centre	1.5	5.1	1.3	11.8	6.8	5.6	6.8
Maternity hospitals and Bishkek city perinatal centre	0.0	3.8	4.0	2.0	5.4	4.2	2.7
At home	4.6	5.1	2.7	3.9	1.4	4.2	2.7
En route	1.5	2.6	1.3	2.9	2.7	2.8	1.4
Other countries	3.1	2.6	1.3	0.0	0.0	0.0	0.0

Source: Republican Medical Information Centre

A major challenge consists in the workforce, which is insufficient due to multiple reasons, including internal migration and the substantial exodus of skilled health personnel to Russia and Kazakhstan. There is an imbalanced supply of health professionals (anesthesiologists, neonatologists, obstetricians-gynecologists), who are concentrated mainly in the cities of Bishkek and Osh and in oblast centres.

The practice of making informal payments and families' need to pay substantial sums during childbirth (up to KGS 20,000), along with the rude attitude of health staff to patients, also have an effect on maternal health indicators.

III. STRATEGIC INTERVENTIONS

Photo: Erkin Boljurov / UN Kyrgyzstan

3.1. DESCRIPTION OF ONGOING INTERVENTIONS

In the Kyrgyz Republic, the interventions aimed at achieving MDG 5 and reducing maternal mortality; in particular, they are implemented within the national health system reform programmes, legally enforced protocols, articles as well as legal regulations. Nonetheless, there are no specifically adopted strategies on reducing maternal mortality and all interventions aimed at its reduction are conducted within the framework of inter-related programmes focused on improving the health of the population as a whole.

The National Sustainable Development Strategy for 2013-2017 indicates that there is an acute need for changing people's attitudes towards their health and improving the quality of health services. The *Den Sooluk* National Health Reform Programme of the Kyrgyz Republic for 2012-2016 is designed to address these issues (see Box 3)

BOX 3. **THE MISSION, PRINCIPLES AND AREAS OF THE DEN SOOLUK PROGRAMME**

The mission of the Den Sooluk Programme is to create conditions that are conducive to the promotion and protection of the health of the population and every single individual regardless of his or her social status or gender. The programme design is based on the continuity of reform outcomes achieved throughout the previous years of reforms as well as on a consideration of the country's current socio-political context. Its underlying principles include:

- People-oriented
- Results-oriented
- Elimination of systemic barriers to health promotion
- Democratic implementation
- SWAp

The indicators of gains in people's health include a consideration of:

- Cardio-vascular diseases
- Maternal and child health
- Tuberculosis
- HIV infection

To reduce infant and maternal mortality, the key focus should be on improving the quality of health care provided by health facilities at all levels of care and the active involvement of the public and other public sectors in maternal and newborn health care.

Expected maternal health care outcomes include:

- To reduce by 10 percent the number of parturient women with severe anemia by 2014 and by 20 percent by 2016
- To reduce by 20 percent the incidence of eclampsia by 2016
- To reduce by 20 percent the incidence of post-partum purulent-septic complications using surgical interventions by 2016
- To reduce by 20 percent the incidence of post-partum hemorrhage using surgical interventions by 2016
- To increase by 10 percent the coverage of women of fertile age using modern family planning methods by 2016

The *Manas Taalimi* National Health Reform Programme implemented from 2006 to 2010 has played a crucial role in the health system of the Kyrgyz Republic. The programme was the core regulating the implementation of citizens' rights to health promotion and disease prevention at the level of the Ministry of Health within the framework of priority programmes aimed at achieving the Millennium Development Goals in the health care sector.

The goal of the programme was to improve the health status of the population through the creation of an effective system of health care delivery that would provide better access to high-quality care while reducing the financial burden. The programme has been strategically focused on the completion and institutionalization of reforms initiated within the framework of the programme, particularly health financing and restructuring and the inception of the next generation of reforms in public health and medical education.

Despite political and economic constraints, the programme has been generally implemented. Government spending on health rose from 10 percent to 13 percent of the total national budget, indicating that the government placed priority on the health sector. The health funds were transferred from the oblast level to the national level, which enabled the gradual alignment of financing standards across regions and eliminated the unfair distribution of resources within the State-Guaranteed Benefits Programme and the MHI Additional Drug Package.

The impact of the programme's reforms on objectives of *Manas Taalimi* has been mixed. On the one hand, it has demonstrated notable progress in ensuring financial security, accessibility and efficiency. On the other hand, progress in improving the quality of care and improving the health of the population has been less impressive.

On numerous occasions, the establishment of the Mother and Child Group under SWAp since 2007 has improved coordination and integration between the Ministry of Health and donor organizations.

The State-Guaranteed Benefits Programme (SGBP) is the public health standard in determining the scope, types and terms of health care and ensures the implementation of citizens' rights to health care in health organizations regardless of the ownership of the actors engaged in the programme. Since 2006,

the SGBP has been extended to include free health care services for children under five and women during pregnancy and childbirth. Owing to the introduction of the single-payer system initially at the oblast level with the subsequent accumulation of funds at the national level, the financial burden for 40 percent of the poorest population has declined considerably and the geographical and financial barriers that impeded access to health care have diminished. The MHI programmes include micronutrient supplements (folic acid and iron) prescribed to pregnant women.

Primary health care has undergone further strengthening through capital investments in FAPs and an increased proportion of funding allocated from SGBP to the PHC level from 23 percent in 2006 to 39 percent in 2010. The public health reforms were initiated through the adoption of some legislative acts and the revision of intersectoral legal regulations focused on creating a modern public health service adequate to the burden of diseases prevalent in the country.

Since 2006, the intersectoral National Reproductive Health Strategy for 2006 to 2015 has been implemented. As part of this strategy, the Oblast Coordinating Councils for Reproductive Health were established, which address only issues related to the health organizations. Because of the lack of earmarked financial support for this intersectoral strategy, its implementation has been limited mainly to the performance of health organizations (in addition, there is no Plan of Action for Stage Two and target benchmarks).

The Kyrgyz law 'On Reproductive Rights and Safeguards of their Implementation' is aimed at reinforcing a concerned and responsible attitude of citizens, government and facilities toward reproductive health care. At the moment, the law has no enforcement mechanisms or earmarked funding and is more declarative. This leads to inefficient functioning of the system of providing government support for working mothers. As of 1 January 2013, the allowance for pregnancy and childbirth as part of the social benefits package makes only seven calculated indices, or KGS700. The issue of introducing co-payments for services delivered to parturients was raised numerous times. Notwithstanding this, the commitment of key health system decision makers enabled these services to keep services free for parturients, as this issue is quite crucial to ensuring access to such services.

The law 'On Protection of Breastfeeding and Regulation of Marketing of Breast Milk Substitutes and Items for Artificial Feeding' was adopted in 2008. Along with the adopted law, there are ongoing initiatives for promoting baby-friendly hospitals whereby the policy and strategy of early and prolonged breastfeeding are implemented. These initiatives have been implemented since 1999 with technical support from UNICEF and 46 maternity hospitals in the country have been awarded the international title "Baby-Friendly Hospital" (BFH), while 56 percent of births are in these maternity clinics.

The key strategy for reducing maternal mortality is the scale-up of effective perinatal care that meets the WHO's requirements; the Programme on Improvement of Perinatal Care in the Kyrgyz Republic for 2008 to 2017 was approved to implement these requirements. Furthermore, the Order of the Ministry of Health 'On Organization of Maternity Hospitals/Wards and Further Improvement of Quality of Obstetric-Gynecological and Neonatal Care in the Kyrgyz Republic', which integrates the principles of the Effective Perinatal Care (EPC) Programme in obstetric health care facilities, was approved.

The National Nutrition Improvement Strategy of

the Kyrgyz Republic for 2013 to 2017 provides for interventions to improve nutrition and to prevent anaemia. The major efforts aimed to control hyponutrition/malnutrition and micronutrient deficiency include the following interventions implemented by the Ministry of Health:

- Pursue adequate child-feeding practices (exclusively breastfeeding, extended/ prolonged breastfeeding, supplementary feeding)
- Fortify home-made food for children with the vitamin and mineral supplement 'gulazyk'
- Vitamin A supplementation for children under five years of age and puerperal women during the first three days post-partum
- Raise awareness of the public about nutrition issues through Village Health Committees
- Improve the quality of health care delivered to the public in diseases associated with improper nutrition
- Enhance the control of communicable and invasive diseases
- Institute the control and surveillance of food quality; develop amendments to legal regulations on the mandatory fortification of flour

Some programmes on mother and child health care based on the WHO strategies are supported by parallel financing donors (UNFPA, UNICEF, USAID, CDC, ADB and KfW). However, these programmes are implemented mainly at the level of the pilot oblasts, and so their further institutionalization is quite challenging due to insufficient funding. For example, the Ministry of Health, together with partners, annually conducts the mapping and identification of areas for the implementation of perinatal programmes (prenatal care, EPC, prevention of MTCT of HIV/AIDS, neonatal intensive care, exclusive breastfeeding, etc.). According to official data from the end of 2012, these programmes covered 62 percent of maternity facilities. The strategy of the Ministry of Health was to integrate some MCH programmes into one block of programmes, with the leading role being assumed by the EPC Safe Motherhood Programme.

Following the WHO methodology 'Beyond the Numbers', the Ministry of Health issued the order 'On Nationwide Introduction of Confidential Enquiry into Maternal Deaths and Pilot Review of Near-Miss Cases in the Kyrgyz Republic' and the order 'On Transition to the Definition of Mother's Death Pursuant to ICD-10, Revising and Amending the Membership the National Commission for Prevention and Reduction of Maternal and Perinatal Mortality', which contribute to a more accurate reporting of death cases. 'Confidential Enquiries into Maternal Deaths' initiative is implemented at the national level to verify the true causes behind maternal deaths and to address issues related to the elimination of such causes.

In 2008, the Ministry of Health issued an order approving clinical protocols (CP) for the management of normal and complicated pregnancies and childbirth. National clinical protocols regarding general recommendations on major obstetric and neonatology complications and care in normal deliveries were developed and disseminated; this is tremendous progress. Despite these national clinical protocols, though, the staff are largely unaware of them or are not governed by them in their clinical practice and even wrongly quote their content. In order to improve the quality of skilled care to pregnant women, parturient and puerperant women and newborns, a series of educational training on effective perinatal care, neonatal resuscitation and effective newborn care was conducted. The 'Strategic Assessment of Contraception and Abortion-related Policies, Programmes and Services in Kyrgyzstan' is

BOX 4. **WHO INITIATIVE ON CONFIDENTIAL ENQUIRY INTO MATERNAL DEATHS: OPINIONS**

Many doctors believe that the introduction of the review of 'near-miss' cases of maternal death using the principles and approaches of the WHO methodology 'Beyond the Numbers' is superior to traditional practices of enquiry into maternal deaths and complications. During a conversation, one doctor said: "The introduction of 'near-miss cases' review (NMRC) has facilitated the improved communication between colleagues, a team-based approach, skills and knowledge of health professionals, in particular of doctors, and diminished incidence of care not meeting the appropriate standards, in severe cases." On the other hand, some facilities where NMCR has been introduced are hypothetically concerned with the quality of the process of discussing real facts, identifying real causes, coordinating specific priority actions and their implementations, and following up with monitoring. The current NMRC system of reporting is quite formal, with neat protocols/minutes bearing official seals that provide no information about the quality of the process. One health professional using the traditional system of review and punishments was surprised: "Is there any other system of review of complications and mortality? Why I am not aware of the near-miss case review system? Is this my fault or was someone supposed to tell me about it? Please help me; I want to learn how I can perform better." Regrettably, the traditional punitive system is still used for the review of most cases of maternal and perinatal mortality and severe obstetrics complications. The following quote from a conversation on traditional ways of review illustrates the point: "The traditional review of near-miss cases and mother deaths diminishes the extent of satisfaction with the work we do and puts psychological pressure on the personnel." The histories of diseases are rewritten several times, the autopsy specialist is offered bribes, and the 'responsible' health worker is under great stress, resigns and leaves the country.

Source: Improving quality of care to mothers and newborns in the Kyrgyz Republic (WHO, UNFPA, UNICEF, March 2012.

conducted by the Ministry of Health, WHO and UNFPA, and the Ministry of Health, jointly with WHO, has designed a project on the training of midwives to perform safe abortions and ensure accessibility of drug-induced abortions in rural settings. The range of perinatal health care services provided at PHCs has been developed (FAPs, FGPs, FMC) and the range of services for hospitals has been supported by UNICEF on the basis of WHO recommendations. Under the World Bank project 'Financing Based on Results', the mechanisms to improve the quality of delivered health care and to facilitate progress towards MDG 4 and MDG 5 are being developed.

With the support of WHO, the revised and approved Individual Card of Pregnant Woman are being circulated among pilot facilities in Bishkek city and Chui oblast. In March 2012, an evaluation of the quality of perinatal care to mothers and newborns and of the quality of prenatal and postnatal care at primary health care facilities was conducted with support from donor agencies whereby the challenges and their solutions were identified. The key challenges included: the irregular collection of statistical data and their poor quality; a lack of basic conditions such as ample water and heating; a lack of essential equipment, consumables and appropriate staff;

a disproportionately high supply of health care workers in urban settings (more than 50 percent of obstetricians-gynecologists and neonatologists are concentrated in big cities, while there is acute shortage of health professionals in rayon (regional) hospitals, particularly in remote regions); a lack of continuity in care that extends from family planning, pre-conception, gestation and birth to the antenatal period, as well as a lack of continuity of care at and between different levels of providers, etc. The findings of this assessment are included in the chapter on bottlenecks.

The pilot installation of software for the registration of newborns and infant mortality by health organizations and providers of primary and inpatient care began in 2009. Using this software, the systematic monitoring of newborn registration among pilot health care providers is carried out with the support of UNICEF. Following the findings of the monitoring, some inpatient care providers improved the management of the primary registration of medical records, reports, and lists of newborns. Cards for mothers and newborns are produced automatically.

3.2. KEY WEAKNESSES OF ONGOING INTERVENTIONS/ REFORMS

The reforms of the past 15 years, particularly the *Manas taalimi* Programme, have provided critical lessons that have affected the content of the Den Sooluk Programme. Furthermore, some issues were not addressed by the *Manas* and *Manas taalimi* programmes, but were integrated into the *Den Sooluk* Programme.

According to the outcomes of 15 years of intensive reforms, health gains appeared to be lower than expected. This can be partly explained by objective factors such as the slow improvement of health indicators in general and limited financing. Partly, the cause is the lack of attention given to changing the key determinants of health and clinical practice. In fact, the degree of complexity of changing clinical practice to improve the quality of health care is clearly underestimated. As a result, the extent of coverage of health services based on principles of evidence-based medicine that ensures the greatest health gains given the investments in key health conditions (e.g., hypertension, diabetes, prenatal care, detection of TB cases, etc.) appears to be low. This requires strengthening the mechanisms for improving quality at the level of health organizations, which, in turn, requires increasing performance-based accountability and full-fledged management autonomy.

The unstable political situation in the country has harmed reforms in the health system. The frequent changes of senior management have led to a lack of continuity in reform trends and inhibited the accumulation of sufficient knowledge and competencies required for effective management. In recent years, the health care system has had difficulties with the labour supply. There is an excessive concentration of health personnel in the cities of Bishkek and Osh, while there is a shortage of staff, primarily of practitioners, in oblasts and rural areas. Thus, the challenge is not a shortage in the number of health workers, but rather in their distribution. The lower quality of social life in oblasts and rural areas has become a major impediment to young professionals' choosing to work and to reside in the countryside. The special arrangements taken for involving local authorities (local state administrations, LSAs, and

LSGs) in the development of incentives for young professionals to work in the regions have been insufficient.[37]

As a result of increased funding, co-payments for obstetric services and health care for children under five have been abolished, the supply of medicines to health facilities has improved, and demands for informal payments for drugs and medical supplies have decreased. Nonetheless, increased public financing, combined with donor funds, appeared to be insufficient to cover the growing number of admissions (560,000 admissions in 2006 and 950,000 in 2010)[38] and the growing number of individuals entitled to benefits (27 groups in 2001 and 72 in 2010. At the same time, inefficiencies in health service delivery remained unchanged, with excess capacity in the cities of Bishkek and Osh, and outdated clinical practices (for example, unjustified hospital admissions and poly-pharmacy, or over-prescription of potent drugs). The emerging gap in funding – which makes up an estimated 27 percent to 39 percent of the total scope of spending – is filled through informal payments. In addition, the financial gap in SGBP does not fully exempt the patient from the additional out-of-pocket purchase of drugs, blood and blood substitutes, especially in cases of emergency obstetric care. This not only creates a heavy financial burden for the people, but also undermines public confidence in the reform process.

Emergency care was not developed in accordance with established standards. Many tertiary-level facilities did not develop as organizations that provide high-tech and modern health services. The constraints associated with the regulatory mechanisms of private health facilities have led to their uncontrolled operation.

Prior to 2006, informal payments for drugs and medical supplies tended to steadily decline due to the previously noted increase in efficiency whereby public spending on patients, rather than on infrastructure, has drastically increased. However, informal payments to health personnel have continued to grow, a fact that is associated with the low pay and the growing gap between medical personnel's wages and the country's economy.

The effective regulatory framework[39] governing public health in the Kyrgyz Republic is not conducive to sufficient coordination between the provision of individual services at the PHC and hospitals levels, which reduces the efficiency of certain priority interventions. On the other hand, there is insufficient intersectoral cooperation concerning the prevention of communicable and non-communicable diseases and the maintenance of a sanitary and hygienic environment.

37. Kojokeev K., Murzallieva G. and Manjieva E., 2008. Why Our Doctors are Leaving? Exploring the Causes of Migration of Health Workers from Kyrgyzstan, Health Policy Research Document, Ref. No. 51, Health Systems Development Center; WHO-EURO.
38. The government was forced to enlarge the number of eligible groups due to the activity of a more politicized population, the country's poor economic status and parliamentary endorsement of demands for 'eligible categories'. Meanwhile, the financial gaps in SGBP and the budget have led to a wide perception among the public as a symbolic gesture .
39. Detailed description of ongoing interventions is presented in the Annex.

3.3. STRATEGIC INTERVENTIONS

Following the review of the current interventions aimed at achieving MDG 5 and focus group discussions with experts from various organizations involved in the process of achieving MDG 5, the top priority areas of strategic interventions required for accelerating the progress towards MDG 5 were identified. The focus groups rated the most 'lagging' areas that have a significant effect on the attainability of MDG 5 and that require immediate intervention. These include:[40]

1. Reproductive health care
2. Effective perinatal care
3. Emergency obstetric care

These are strategic areas and are included as top priorities in the Action Plan of the Kyrgyz Republic to accelerate progress towards MDG 5. The shortcomings in these areas (family planning and safe abortion, proper prenatal care and continuity of performance of health workers in PHSs and hospitals, skilled care during delivery and the post-partum period, timely provision of comprehensive emergency obstetric care) lead to major health causes behind maternal mortality.

REPRODUCTIVE HEALTH CARE

Reproductive health is the most critical prerequisite for planned pregnancy and safe delivery, as it provides for safer sexual life, better ability to conceive children and the opportunity to make an informed decision on family planning. Reproductive health implies the right of men and women to information and access to safe, effective, affordable and acceptable methods of contraception and/or different legal methods of birth control of their choice. It also entails the right of access to proper health services enabling safer gestation and labour of women and ensuring the birth of a healthy baby. In view of this, the key priority interventions to improve reproductive health care were:

- Raising public awareness about family planning methods, the danger signs of pregnancy, and the need for care and attendance to pregnant woman
- Ensuring public access to adequate medical services for family planning and contraception, with an emphasis on vulnerable groups

40. These areas are in line with the international assessment of required interventions. Thus, according to the survey carried out in the framework of 'Assessment of Quality of Inpatient and Primary Care for Mothers and Newborns' (WHO, UNFPA, UNICEF, 2012), several areas for improvement in the Kyrgyz Republic were identified. In particular, it is necessary to make additional efforts to implement the principles and practices of effective perinatal care, the complete eradication of obsolete and potentially harmful practices and the implementation of proper interventions for the prevention of infection and the control, continuity and continuum of care to mothers and children from gestation and childbirth to the postnatal period, within and between different levels (PHC, maternity hospital, referral centres) in private and public institutions, including regular exchange of information and feedbacks. Communication and information-sharing at all levels (within institutions, between institutions, with users of services) are key issues that need improvement, as is the the issue of informal payments, which, according to employees, mothers and their families, are a common and widespread practice. The further improvement of quality of care for mothers and newborns and ensuring sustainable outcomes require training, follow-up and mainstreaming of training on EPC and antenatal and postnatal care as well as the building up of their knowledge with the support of international experts.

EFFECTIVE PERINATAL CARE

From the perspective of the health of an expectant mother and her child, effective perinatal care is the most crucial contribution to the healthy development of a fetus and thus to the favourable outcome of pregnancy. In view of this, it is imperative to improve the quality of delivered services throughout the entire perinatal period, including the focus on the following priority interventions:

- Improve the quality of various antenatal services
- Expand the coverage of quality antenatal care services (internal migrants and rural women)
- Increase awareness of the rural population about their rights to the State-Guaranteed Benefits Package, the necessity of receiving routine antenatal care and identifying dangerous signs of pregnancy, etc.
- Scale up effective perinatal care programmes further
- Improve the infrastructure and supply of equipment to maternity hospitals

EMERGENCY OBSTETRIC CARE

The quality of emergency obstetric care (EOC) directly affects the process of delivery, as untimely and inappropriate actions during complications of pregnancy may pose a threat to the life of a pregnant woman. With early diagnosis of complications and surgical interventions, a lethal outcome can be prevented in many cases. Because the quality of health professionals' training, the availability of equipment and the commitment of health organizations have such a huge impact on EOC, the following priority strategic interventions can be highlighted:

- Development and introduction of legal regulations, standards, clinical guidelines and protocols, and tools for routine monitoring of EOC
- Management of the quality of EOC services, supply of essential resources for the provision of EOC (HR, infrastructure, equipment, medicine and medical supplies, timely transportation under escort of health workers to the appropriate level of health care and delivery of skilled care)
- Ensuring of the integration of interactive electronic medical services

Also important are intersectoral interventions that influence not only the medical sector, but also the social, educational and other sectors. These interventions include the enhancement of social support for pregnant women in vulnerable groups and the wide usage of training modules in PM, ANC, EPC, EOC and clinical protocols.

IV. REVIEW OF CONSTRAINTS AND BOTTLENECKS

Photo: UN Kyrgyzstan

Because maternal health is important in determining the health the population, the health care system for mothers and pregnant women is encountering persistent challenges. This section reviews the constraints and bottlenecks through the lenses of three areas: reproductive health care, effective perinatal care, and emergency obstetric care.

With support from WHO, UNICEF and UNFPA, prenatal and postnatal care at the primary health care level as well as perinatal care for mothers and newborns[41] were evaluated in March 2012. This evaluation considered constraints and solutions, including further scale-up of effective perinatal care practices across the country; the complete eradication of obsolete and potentially harmful practices; the taking of proper actions for the prevention and control of infection; continuity and continuum of care to mothers and children in private and public institutions (within institutions, between institutions, with users of services); and informal payments, which, according to employees, mothers and their families, are common and widespread.

THE PROCESS OF IDENTIFICATION OF PRIORITIZATION OF BOTTLENECKS

During the review of the proposed strategic interventions, the key bottlenecks to the implementation of priority interventions were identified. Because the range of potential bottlenecks is quite broad, a two-phased survey was conducted. During the first phase, experts in Bishkek[42] were surveyed in order to identify the most crucial factors. After counting the scores for each factor, 20 core factors were identified. These most crucial factors were proposed for consideration during discussions in regions. The survey of focus groups was designed to prioritize the causes leading to complications of pregnancy and to maternal mortality as well as the bottlenecks to implementation of strategic interventions. During the focus group discussions in Talas, Osh and Bishkek, regional health experts shared their opinions about the most critical challenges related to maternal mortality and their potential detrimental effect on the progress towards MDG 5.

Thus, the challenges outlined in this section involve major constraints to the health care system itself in terms of appropriate and affordable maternal health and public health services that would address socio-economic and cultural barriers, including public awareness about family planning and safe contraception, especially in rural areas. The analysis seeks primarily to identify and prioritize these bottlenecks so that they can be addressed through a cost-effective approach (including intersectoral) in the mid-term future.

4.1. REPRODUCTIVE HEALTH CARE

The key potential bottlenecks to implementing interventions for the improvement of reproductive health care are:

41. Evaluating Quality of Care to Mothers and Newborns in Hospitals and Primary Health Care (WHO, UNFPA, UNICEF, 2012).
42. Leading specialists of MH, national centres, educational establishments, specialists of international organizations.

1. Lack of health care focused on adolescents and youth on reproductive and sexual health (RSH), including family planning and contraception security

At present, the lack of reproductive health services for children, adolescents and young people manifests itself in fewer child/adolescent gynecologists at the primary level due to insufficient funding and in the poor qualifications of general practitioners who treat children and of gynecologists, uro-andrologists, social workers and counsellors in RSH who deal with teenagers. "The right of adolescents to knowledge and services in area of RH/PM is declaratory, limiting access to adequate information on RSH, especially in rural areas, to acquire knowledge and skills in family planning and safe sex." [43] The lack of counselling standards and of contraceptives at the level of PHC is the real obstacle to providing contraceptives to the population,[44] especially to youth in rural areas. The proportion of adolescents aged 12 to 19 years who used contraception throughout the country in 2011 was 12 percent; in Batken, this indicator reached 9.1 percent; in Naryn, 7.3 percent; in Talas, 6.5 percent; and in Bishkek, 20.4 percent.[45] Free contraceptives are not accessible in all state medical facilities, and the access is limited especially for adolescents under 18, unregistered people, and migrants. Contraceptives are not included in SGBP; they are in the list of the Additional Package of SFBP at the outpatient level for insured persons and in limited assortment. In urban pharmacies, there is a great choice of contraceptives, but their price is an obstacle for adolescents, youth and the poor. Moreover, the educational component at schools suffers greatly. School programmes in sexual education, such as those that promote 'healthy lifestyle', are not mandatory. These programmes are implemented with the support of international organizations and are not maintained by the ME; they are effective until the end of a grant.[46]

Given the increasing rates of teenage pregnancy and childbearing, adolescent abortions, proportion of dystocia among girls aged 13 to 19 years (46.7 percent in 2003 and 53.7 percent in 2011),[47] the elimination of this bottleneck would significantly reduced maternal mortality among youth and primiparas. Well-focused policies for the protection of youth and adolescents in RSH care would potentially affect 97 percent of youth aged 12 to 19 years.[48]

2. Lack of a mechanism to ensure the supply of contraceptives at the expense of the state budget, incomplete coverage of Mandatory Health Insurance (related to contraceptives) for the rural population and the informal sector, shortcomings of the mechanism for the accounting/reporting of abortions and planning of contraceptives, and insufficient implementation of modern methods of safe abortion in medical facilities

43. Strategic assessment of policy, programmes and services in contraceptives and abortions, 2011.
44. Social marketing in family planning programmes. The results of the research in the frame of the project, Bishkek, 2007, p.27.
45. PMIC data.
46. Knowledge, attitude, practice of adolescents in the issues of healthy life style. UNODC, UNCEF, 2008, p. 124.
47. PMIC data.
48. Progress report on the needs analyses in contraceptives by the project RYR2R204 UNFPA 'Enhanced supply of contraceptives of reproductive health care', 2009.

The Kyrgyz Republic does not produce contraceptives and there is no system to guarantee the supply of contraceptives. Given that the majority of the population because of poverty cannot afford contraceptives, delivery of contraceptives to the country continues with the support of parallel funding by international donors. Limited resources do not allow purchases, so the country completely relies on external donors. The main suppliers of contraceptives to vulnerable populations are international organizations (such as the United Nations Population Fund and GFTAM), but the range of contraceptives is significantly limited. Based on the demographic analysis of the Country Commodity Manager Programme, the coverage of contraceptives is still insufficient. The delivery of contraceptives through UNFPA, USAID, Hope and GFTAM covers a small percentage of the need for contraceptives. According to RMIC, the usage rate of contraceptives has decreased over the last five years by 1.8 times. The lowest rate of usage of contraceptives was in Naryn oblast (3.1 percent of the total number of women in 2010, 4.1 percent in 2011) and Talas (4 percent in 2010 and 4.4 percent in 2011). In addition, there is a significant gap in contraceptive usage among women at risk.[49] In 2011, an average of only 24.5 percent of women at risk received contraceptives (44.8 percent in 2010, 39 percent in 2009). The worst situation of risk groups in 2011 was in Jalal-Abad oblast (3.7 percent) and in Osh (4.2 percent).[50] Women from villages have limited access due to insufficient time and money to travel for family planning or abortion. In 2000, the Mandatory Health Insurance Fund (MHIF), together with MH, implemented an additional programme for citizens at the primary level that includes contraception (i.e., oralcon, regividon, TriRegol and, since 2011, IUDs. Under this programme, insured citizens, (including workers, farmers, children under 16 with parental consent, and persons receiving social security benefits) can buy medicines if they have a prescription from a FGP or FAP physician; in that case, they pay only part of the cost, with the rest of the cost being paid by those pharmaceutical institutions that have a contract with the territorial administrations of the MHIF at expense of MHIF. At the same time, most vulnerable women remain uninsured and thus do not have access to contraceptives.

In addition, there is little awareness about contraceptive methods and the opportunities to purchase contraceptives. This, in turn, leads to low coverage, particularly among the rural population. Awareness among urban youth and women about contraception is significantly higher than among the rural population, but most people have little awareness about emergency contraception. Some people receive information about contraceptives and female physiology from reference books, the internet and magazines. The study highlighted the lack of awareness, interest and involvement in family planning issues.[51] The service provider recommendations for patients are not always based on evidence and there is ignorance about the medical criteria for the prescription of contraceptives. Among some people who use contraceptives, the decision to purchase contraceptives is based not on consumer awareness, but mainly on cost. Young city-dwelling women, having access to different kinds of contraceptives, increasingly use oral hormonal contraceptives. Older women prefer intrauterine contraception, pointing out the simplicity, the possibility of long-term use and

49. Including internal and external migrants, rural women, pregnant women with no documents, single mothers with many children, poor women, PLHIV etc.
50. RMIC data.
51. Health of population and activities of medical facilities in the KR, 2009, Bishkek, pp. 316-318.

the more affordable cost. Persons under 18 years increasingly prefer condoms, which shows contraceptives' greater accessibility in cost and availability. In urban pharmacy chains, there is a large choice of contraceptives, but their price is an obstacle for adolescents, youth and the poor. The lack of a regular and ensured supply of contraceptives leads to increasing rates of unwanted pregnancies and, as a result, to the growing number of abortions, which are often performed improperly. The improvement of the mechanism of the supply of contraceptives could potentially affect up to 80 percent of women from vulnerable groups; this would reduce the number of unwanted pregnancies and abortions.

4.2. EFFECTIVE PERINATAL CARE

For this intervention, the priority bottlenecks that impede on its implementation are identified for antenatal care, childbirth and the post-partum period.

Antenatal care (ANC)

1. The poor quality of ANC for pregnant women with high health and social risks, i.e., internal and external migrants, rural women, pregnant women, single women, women with large families, poor families, and people living with HIV/AIDS (PLWHA)

The coverage of pregnant women with antenatal care in the Kyrgyz Republic has always been very high (96.9 percent on average,[52] with regional rates from 92.7 percent to 99.4 percent),[53] but the content and quality of medical surveillance requires significant improvement. The low quality of antenatal care is also linked with the lack of a wider range of services offered to pregnant women with different pathologies. This is especially the case in rural areas and is due, among other things, to the lack of regular monitoring of compliance with antenatal care clinical protocols, extensive brain drain', and a lack of motivation among health care workers. Socially vulnerable groups that have high medical risk have a large influence on the maternal mortality rate. This bottleneck is caused by the delay in registration with the antenatal services (especially for internal migrants), which leads to poor laboratory diagnosis of complications during pregnancy at PHC (FMC/FGP/FAP). High rates of migration to Russia and Kazakhstan affect the timely receipt of antenatal care, which, in turn, affects the health of pregnant women, reduces the proportion of normal delivery, induced abortions, and increases the overall rate of premature birth and miscarriage. Furthermore, the absence of national and local data collection on vulnerable pregnant women (i.e., those who are very poor, are orphaned, have poor social networks, are migrants, or suffer from cancer, HIV, tuberculosis, severe heart defects, diabetes or other chronic diseases) at the Ministry of Health and the low level of involvement of the ME, MSD, and LSG and the civil sector lead to problems in antenatal care coverage. Thus, an increase in the quality and availability of antenatal care would significantly benefit vulnerable categories of pregnant women, especially in regions with particularly high levels of poverty, i.e., Naryn oblast (which has an extreme poverty rate of 14.9 percent) and Talas (which has an extreme poverty rate of 8.4 percent); [54] this would affect over 130,000 pregnant women annually.

52. Multiple Indicator Cluster Survey, 2006, NSC KR and UNICEF.
53. The health of women and newborns in Chui Oblast and Kyrgyzstan: assessment and support interventions. Bishkek, 2009.
54. NSC data.

2. The low level of awareness of the population, including uninsured pregnant women, about the Additional Package provided through the Mandatory Health Insurance (including iron, folic acid, iodine, zinc, and fortified products)

One of the major adverse effects of this bottleneck is micronutrient deficiency secondary to malnutrition, particularly among women and children. In the Kyrgyz Republic, there is a high incidence of diseases caused by malnutrition: anemia (27 percent of non-pregnant women, 22.9 percent of children in the first five years of life), latent iron deficiency (41 percent women), folate deficiency (42 percent of non-pregnant women),[55] iodine-deficiency disorders (61.6 percent of pregnant women and 43.1 percent school-age children)[56] and stunting (chronic malnutrition) among the children of the first five years of life (22.2 percent). Thus, nutritional disorders among women and children caused by deficiencies of iron, zinc, folic acid and other micro- and macro-elements are increasingly the cause of birth defects, delays in physical and mental development and cognitive activity of children, and immune system disorders, all of which increase the likelihood of death from common diseases and economic underdevelopment. Currently, the draft national strategy for the improvement of the nutritional status of the population for the period from 2013 to 2017 is under broad discussion.

Joint intersectoral activities with the Ministry of Health aimed at 1) providing information about adequate infant feeding practices (exclusive breastfeeding, prolonged breastfeeding, complementary foods), 2) providing home-made children's food enrichment with vitamin A and the mineral supplement 'gylazyk' for children under five years and mothers during the first three days after giving birth, 3) informing the population about nutrition through rural health committees, 4) increasing medical assistance for diseases caused by irrational nutrition, 5) strengthening the control of infectious and parasitic diseases, 6) controlling and supervising the quality of food, 7) making amendments to laws regarding the mandatory fortification of flour, with increased responsibility among manufacturers and suppliers to improve the health of pregnant woman by reducing anemia and congenital malformations and complications of pregnancy and childbirth. All of this could reduce maternal and infant mortality.

According to the evaluation carried out in FAP and FGP with hospital beds in 2012,[57] only 12 medical facilities (50 percent) organized pharmacies, which have medication under the Additional Package of MHI. Women from the villages have limited access due to money and time to travel for family planning or abortion.

55. UNICEF, CDC USA, NSC 2009, preliminary results of a nutritional survey among non-pregnant women and children from 6 to 59 months.

56. A national study on iodine status among children and pregnant women, UNICEF, 2007.

57. Overview of rapid assessment of the current situation in the FGP and FAP with maternity beds in the pilot regions, 2012 (MH, AH and UNICEF).

Besides, based on the situation analysis, as well as in the light of the focus groups and interviews with experts concerning maternal mortality, it was revealed that, among the socio-cultural factors leading to complications of pregnancy, the major threat is the low level of awareness and education of pregnant women and mothers about pregnancy in general. The average rating[58] of this factor was 1.46. Second and third places were taken by factor that are also relevant to little awareness among the general public, and particularly among rural women, about family planning methods (2.81) and the main signs of threats to pregnancy (2.85).

Expanding coverage, including for vulnerable populations, and improving awareness about their rights to the Additional Package of MHI would greatly enhance the consumption level of required medications, etc. This, in turn, would lead to improved pregnancy and reduce complications among 80 percent of women in rural areas.

Childbirth and Post-partum Care

1. Lack of institutionalization of Effective Perinatal Care (EPC) in the undergraduate health education system, including lack of mechanisms to monitor clinical protocols

The main obstacles to implementing EPC are the inefficient management of human resources (deficiency and imbalance), weak practical skills and theoretical knowledge among specialists with respect to efficient technologies, and the lack of systematic training for managers to manage the quality of medical services. According to the evaluation[59] carried out in 2012, despite the existence of national clinical protocols, personnel had limited knowledge or were not using clinical practice and even misquoted content. Only a few agencies have developed local protocols/algorithms in accordance with the national protocols. In many institutions, the staff does not know, does not understand and does not follow national or local protocols.[60] The introduction of EPC reduced the unnecessary use of drugs (polypharmacy) and over-medication in maternity wards for newborns and mothers, and increased the use of a limited number of evidence-based medicines and effective practices. However, in facilities where this either not implemented or ignored by doctors, the continued use of unnecessary or harmful medicines was observed. In addition, ignorance or failure of the new low-cost methods and algorithms for EPC and of clinical protocols results in a lack of follow-up during and after childbirth. The introduction of the institutionalization of EPC would achieve 100 percent coverage of obstetrical organizations practicing EPC.

2. Lack of safe conditions for delivery (lack of water, power and heating) and lack of essential infrastructure at FAPs and FGPs with beds

According to an assessment of FAPs and FGPs carried out in 2012,[61] only six (24 percent) medical facilities meet the sanitary standards; with 15 maternities (76 percent) observed as overcrowded. Nineteen (90 percent) have stove heating; there were cases in which the low indoor temperature during winter hampered a full examina-

58. In the course of conducting the focus groups, each bottleneck has been assigned a rating depending on its priority. So 1 is the most important, followed by 2, 3, 4, etc. Then calculations of the average rating of each of the bottlenecks in the various groups of factors affecting maternal mortality were made. Thus, the lower the rating (i.e., rank), the higher the priority of the bottleneck.
59. Evaluation of the quality of care for mothers and newborns in hospitals and primary health-care institutions, 2012 (UNFPA, WHO, UNICEF).
60. Evaluation of the quality of care for mothers and newborns in hospitals and primary health-care institutions, 2012 (UNFPA, WHO, UNICEF).
61. Overview of rapid assessment of the current situation in the FGP and FAP with maternity beds in the pilot regions, 2012 (MH, AH, UNICEF).

tion of patients. More than 80 percent of medical facilities have no clean water, and 71 percent of assessed buildings need complete refurbishment. In nine (43 percent) medical facilities, the sewage system is inoperative; all facilities had on-site latrines. There is a lack of telephone communication in 15 (71 percent) settlements; only five (24 percent) had wireless communication. There is a shortage of necessary materials in case of hospitalization of pregnant women in urgent situations. Available on-site medical ambulances are subject to disposal and economically unprofitable because they consume so much fuel. In all medical facilities, there were no autoclaves; not all had hot-air cabinets and those available are not always working; no log recording the sterilization of essential tools was kept. Intra-hospital prevention control is carried out by sanitary and epidemiological supervision (CSES), representatives of which visited medical facilities no more than once every two to three months. Improvement of conditions for the delivery and creation of modern perinatal centres, improvement of infrastructure, and the equipping of primary (district) and secondary (regional) hospitals to met standard requirements, would significantly improve patient satisfaction and the quality of medical services.

4.3. EMERGENCY OBSTETRIC CARE

The constraints and bottlenecks related to the delivery of emergency obstetric care include:

1. Inadequate referral system among primary health care facilities (PHCF) and secondary and tertiary levels of perinatal care delivery

According to the assessment[62] carried out in 2012, "continuum of care: family planning, preconception, pregnancy, delivery and the post-natal period, as well as the continuity of care between the different levels of care were not achieved." There were cases when a higher-level hospital refused admission/referral for various reasons, including fear of cases with complications that can have negative consequences, a negative impact on statistics and severe punishment of participants. The reduction of maternal mortality in the maternity departments of oblast hospitals (from 36.6 percent in 2010 to 27.7 percent in 2011) indicates a lack of regionalization, meaning that maternal mortality occurs at the level of territory hospitals, which give inappropriate assistance. In 2011, the number of deaths of women increased significantly in national hospitals, from 12.7 percent in 2010 to 18.5 percent in 2011, due to the arrival of women who, in some cases, were temporarily residing in Bishkek with no antenatal care and who often arrived in critical condition or arrived from regions on their own and without admission to the hospital. A crucial factor in maternal mortality and disability is the loss of time during referrals. The main cause of maternal mortality is severe bleeding, a complication that could kill the woman in less than two hours. Thus, preventing and stopping bleeding at delivery are urgently needed to save a mother's life, where the main factor in making the appropriate decision is the experience of the doctor. In addition, maternal mortality is affected by the system of 'three delays': (i) the timely adoption of the decision to ask for help; (ii) the timely delivery to the appropriate medical facility and assistance after delivery; and (iii) the qualification of health professionals and facilities and the readiness of health organizations to provide timely EOC. Residence in remote rural areas is also associated with the risk of high costs, which demonstrates the inability of the

62. Evaluation of the quality of care for mothers and newborns in hospitals and primary health-care institutions, 2012 year (UNFPA, WHO, UNICEF).

referral system to eliminate financial obstacles to remote households. Many secondary and tertiary level organizations were not evolved as organizations to provide specialized and high-tech medical services.

2. Low capacity of health staff involved in EOC (team of anesthesiologists, neonatologists, obstetricians, gynecologists and midwives, including in FAPs/FGPs with beds)

This bottleneck is a result of the low capacity of specialists in medical facilities (anesthesiologists, neonatologists, obstetricians, gynecologists and midwives, including in FAP/FGP with beds). According to an assessment[63] carried out in 2012, in FGP and FAP with maternity beds due to unavailability of day and night care in evening and nocturnal parturient comes home for medical staff with the car to bring them to FGP or FAP for delivery. Within three days of delivery, health staff and nurse work in shifts before discharging women after birth. In observed medical facilities no medical worker has been fully trained in emergency obstetric care (according to Order No. 315 of Ministry of Health of the Kyrgyz Republic, dated June 20, 2008, 'Perinatal Programme in the Kyrgyz Republic for 2008-2017'). In 38 percent of all maternities, effective perinatal technologies[64] (some remote districts of Jalal-Abad oblast (Toguz-Toro, Chatkal, Toktogul, Ala-Buka and Naryn) have not been implemented. A system of monitoring and on-the-job training is not implemented, managers are not interested in introducing effective technologies and clinical protocols, outreach work with the population is conducted improperly, and family preparation program for childbirth is not implemented everywhere. Overall, emergency obstetric care is unsatisfactory; there is no unified approach of rendering assistance to pregnant women with severe forms of pre-eclampsia/eclampsia among obstetrician-gynecologists, anesthesiologists and specialists in intensive care units. A complex set of measures aimed at strengthening the capacity of professionals of medical facilities has the potential to reduce by a minimum of 10 percent of the cases of severe pre-eclampsia and eclampsia. If all professionals integrated EoC knowledge, most hypertensive disorders in pregnancy, post-partum hemorrhage, postnatal purulent-septic complications could be resolved.

3. Inadequate and inconsistent internal audit and monitoring (NMCR, CQI, infection control, monitoring of operational status of auxiliary services, strengthening relations with other HF)

There is low management capacity of health care organizations to assist women in childbirth and maternity care in critical situations, to monitor the quality of services, the purchase of medicines and equipment, blood and blood products, personnel management and timely delivery of transportation at the appropriate level and provide consulting expertise. The growth of septic complications is affected by low infection control in health facilities through disinfection and sterilization of used tools, lack of safe disposal of medical waste, clean water shortages, poor training and monitoring techniques of proper hand washing, improper use of gloves, as well as the untimely use of antibiotics for pre-term rupture of membranes and preoperative antibiotic prophylaxis for Caesarean section. According to the recommendations[65] for combining basic and comprehensive emergency obstetric care, facilities for every half a million people had to be "a minimum of five health care facilities to provide emergency obstetric care, including at least one medical institution capable of providing comprehensive acute care."

63. Overview of rapid assessment of the current situation in the FGP and FAP with maternity beds in the pilot regions, 2012 (MH, AH and UNICEF).
64. Data of MH MIS.
65. WHO, UNICEF, UNFPA and Columbia University, Monitoring emergency obstetric care, 2009.

The introduction of the near-miss case review and continuous quality improvement is limited to pilot projects (Bishkek, Balykchy, Talas, Naryn oblast) and is un-institutionalized and fragmented, and the work of the committees is mainly done by senior nurses of HF who are not all leaders committed to or who have an understanding of the role of quality management, infection control, and patient satisfaction. When there is high-quality internal audit and analysis of all NMCR quality management of health organizations, qualitative and timely provision of EOC, the quality of services will be increased and the number of avoidable maternal mortality will be higher.

4. The lack of modern technologies used for referrals, during pregnant women's transition from the primary to the secondary/tertiary levels of care

Mobile phones are not utilized to transmit data on the health of the patients from primary doctors to specialized care. The lack of mobile data on the status of the pregnant woman while transporting from one level to another level of care considerably complicates the correct diagnosis and delays the process of adoption of adequate measures, especially when there are emergency conditions or serious complication. A pilot project for the establishment and introduction of the first interactive e-health services in the Kyrgyz Republic was implemented recently in order to reduce the mortality rate, to promote maternal and child health, and to promote the effective use of ICT as a powerful tool for public administration, economic and social development, and access to information and government services.[66] The project was implemented in the most remote region of the Kyrgyz Republic, Batken oblast, where there are not enough qualified medical personnel, special health services and medical equipment. The project had two major national centres – the National Centre for Cardiology and Therapeutics (NCCaT) and the National Mother and Child Health Centre (NMCHC). Medical receiving stations are installed in these institutions, and remote equipment to transfer medical data is installed in the oblast hospital. Daily support was provided from the national centres, staffed with highly skilled medical professionals to provide medical support in diagnosis and prescribing treatment. It was noted that this project is in line with the Millennium Development Goals, as it contributes to reduce child and maternal mortality.

Currently, this project is the only source providing the hospitals with modern communications technologies; the experience acquired from this project may help to consider all mistakes and prevent them when taking further measures to improve the communication process between the different levels of health care.

The revision of missteps from the previous experience of the introduction of modern technologies into the work of hospitals, including maternity clinics, as well as the introduction of mobile communications, Internet technologies, and specialized software will speed up the process of transferring data about patients and optimize medical staff, which, in turn, will improve the quality of care during pregnancy and post-partum.

66. 'The first interactive e-health services in the Kyrgyz Republic' with the support of UNDP, in the Batken region.

4.4. INTERSECTORAL BOTTLENECKS

1. Insufficient implementation of training modules for PM, ANC, EPC, EOC in the curricula of educational institutions (pre- and post-graduate education) and limited implementation of clinical protocols (CP) at all levels of care

Knowledge and skills of obstetric specialists in PHC have a huge impact on the provision of quality health services and maternal mortality. However, the current national health system does not provide integrated education and clinical training of medical staff. In the curricula of all health educational institutions and continuing graduate learning, the adequacy of the required knowledge and skills to meet the needs of practical public health services were not assessed. Re-evaluation of the qualifications of specialists is conducted every five years, and certification requires passing a one-month refresher course on the basis of the departments of the Kyrgyz National Medical University. Since the subject of the course may vary, it is not normal that all the specialists, doctors and nursing staff are trained in prenatal health and reproductive health.

From 2009 to 2011, 302 specialists were trained in safe abortion and post-abortion nursing, but they represent only about 8.2 percent of such specialists. While there are 2,045 obstetrician-gynecologists, family doctors and midwives in FHC, there are 494 obstetrician-gynecologists and 1,114 midwives in hospitals. In addition, private practice professionals who provide abortion services were not included. [67]

The introduction of additional training modules along with the widespread introduction of clinical protocols would improve the skills of graduate and post-graduate training of health professionals. In particular, the positive effect will be achieved in education up to 1 000 specialists-graduates, 1 000 midwives, 1,800 nurses each year. For post-graduate training, eradication of this bottleneck will have even greater effect: more than 1,000 of obstetrician-gynecologists, 2 000 midwives and 1 750 family doctors.

2. Insufficient social support for pregnant women (especially among vulnerable women)

The low level of social support to pregnant women exacerbates effects on health. As per estimates,[68] about 80 percent of the poorest population is excluded from the process of receiving social assistance. This leads to low nutritional status, anemia and complications during pregnancy. The system of state support for pregnant women and working mothers in the Kyrgyz Republic is ineffective. According to legislation, working women are provided with social support through the provision of maternity benefits due to temporary incapacity to work. Assignment and payment of these allowances is regulated by the government's regulation on assignment, payments and the amount of sick leave and maternity benefits. The amount of the maternity allowance and the social benefits package is KGS700 per month (less than US$20 per month) and is given to women who are officially employed either by the public sector or a large corporation; many people, including those employed by SMEs, are not covered by this benefit. The size of the existing benefits is extremely small for women who have already given birth; women who have raised six children

67. Strategic assessment of policies, programmes and services on contraception and abortion, 2011.
68. Nation Report Kyrgyzstan: Global Study on Child Poverty and Disparities, UNICEF, 2009.

are awarded with the *Ene danky* Medal and mothers who have given birth to and raised seven children or more are awarded with the *Baatyr Ene* Medal. According to the NSC, the average cost of living in 2011 totalled KGS 4,390 and KGS 4,868 for women of active working age. Rising prices for essential goods, electricity and utilities virtually nullify the contribution of existing social benefits for pregnant women. This money they could spend on checking their own health and the health of the unborn child, but they are forced to spend on necessities.

In addition, due to poor economic conditions and the fear of losing a job, women had little use for maternity leave, which could lead to overstrain, stress and pregnancy complications. Despite legal restrictions, in Kyrgyzstan it is still practiced to refuse to employ pregnant women and to dismiss women on maternity leave. Removal of women from the labour market, because they assumed the role of unpaid providers for the care and upbringing of children, has led to increased poverty among women raising children.

Moreover, there is very little awareness among women about allowances for mothers and children. Most women get information about benefits at the primary level and in the family medicine centres (40 percent).[69] Another 33 percent get to know about them in accounting or human resources departments of their work. 26.6 percent of respondents found out about benefits from friends, acquaintances or relatives. 20 percent of respondents got to know from internet and magazines. TV advertising brings information about the benefits to 6.6 percent of respondents. Women say that there is no single convenient source of information where anyone could get detailed information on the benefits, types and methods of obtaining them.

In view of the above, the availability of information to women about basic social services, as well as a decent amount of social security benefits, is essential for safe delivery, the future health of mothers and children. Thus, measures to increase awareness of vulnerable pregnant women, as well as the availability of additional social services, can significantly contribute to the improvement of the situation of maternal mortality (among up to 80 percent of the poor).

69. The integrated programme to support the family and motherhood in 2012-2015, Annex 1.

Table 4. Priority bottlenecks and obstacles

Area of strategic interventions	Priority bottleneck	Category
	Reproductive Sexual Health	
Reproductive health care	1. The absence of the systematic education and care focused on adolescents and youth in the area of reproductive and sexual health services (RSH), including information on family planning and contraception security.	Policy and planning
	2. The lack of a mechanism for continuous supply of contraception from the state budget, incomplete coverage by the Mandatory Health Insurance (MHI) (in terms of contraceptives) of rural population and workers engaged in informal sector	Budget and financing, services
	Reproductive Sexual Health	
Effective perinatal care	1. Poor quality and accessibility of ANC for pregnant women with high health and social risks (internal and external migrants, rural women, pregnant women, single mothers with large, poor families)	Use of the services
	2. The low level of awareness among the public on an Additional Package of the MHI for pregnant women and childbirth	Use of the services
	Childbirth and post-partum care	
	1. Imperfect system of referral between primary, secondary and tertiary levels of perinatal care	Policy and planning
	2. Low capacity of specialists involved in EOC (anesthesiologists, neonatologists, obstetricians, gynecologists and midwives, including in FAP/FGP with beds)	Services, budget and financing
Emergency obstetric care	1. Imperfect system of referral between primary, secondary and tertiary levels of perinatal care	Services
	2. Low capacity of specialists involved in EOC (anesthesiologists, neonatologists, obstetricians, gynecologists and midwives, including in FAP/FGP with beds)	Policy and planning, services
	3. Insufficient quality and unstable internal audit and monitoring (NMCR, CQI, infection control, monitoring of operating status of auxiliary services, strengthening links with other HF)	Policy and planning
	4. The absence of modern technologies for referral of the pregnant patient during the transition from the primary to the secondary/tertiary levels of care	Services, budget and financing

Area of strategic interventions	Priority bottleneck	Category
	Intersectoral bottlenecks	
	1. Insufficient implementation of training modules in PM, ANC, EPC, EOC in the curricula of educational institutions (pre-and post-graduate education) and limited implementation of clinical protocols (CP) to PM, ANC, EPC, EOC	Policy and planning
	2. Lack of social support for pregnant women (especially among vulnerable categories)	Policy and planning, budget and finance

V. SOLUTIONS

Photo: Fay Walker / UN Kyrgyzstan

Using the MAF methodology, during the process of identification and prioritization of the bottlenecks, the group of experts, together with the members of the focus groups, identified priority short-term and medium-term solutions that will help remove bottlenecks and accelerate progress in achieving MDG 5 in the Kyrgyz Republic. Solutions are based on evidence, recognized best practices and the results of interviews with various experts from the Ministry of Health, health organizations, and international organizations, both in Bishkek and in the regions (Osh, Talas oblasts). In addition, the proposed solutions are based on a situation analysis of maternal mortality, the study of current legislation within the framework of the MDGs, and maternal and reproductive health.

Within each of the priority areas of intervention, based on identified bottlenecks, the following solutions and activities are proposed:

5.1. REPRODUCTIVE HEALTH CARE

Priority intervention 5.1.1. Increase participation of young people in Reproductive Health Care

Bottleneck: The lack of care focusing on adolescents and youth for education in area of reproductive and sexual health services (RSH), including information on family planning and contraception security.

Solution 1. Ensure access of adolescents and youth to consultations about RSH and contraception security (including a network of youth-friendly clinics)

Activities:

- Approve regulations and ensure the expansion of the network of YFS at the primary level, develop and implement a mechanism of referring youth to YFS through health service providers on reproductive health.
- Scale up use of the interactive tool 'Route of Security' to work with youth in health counselling offices and Reproductive Health Centres (RHC).
- Develop and implement mechanisms for providing the Mandatory Health Insurance (MHI) policies through health care organizations that provide services on RSH for street and vulnerable youth through the social protection providers, NGOs and civil society (youth centres).

Solution 2. Implement programmes on RSH in schools

Activities:

- Introduce YFS programme (including privacy, accessibility, comprehensiveness, advice and information), reproductive and sexual health, safe abortion services in the curricula of pre-and post-graduate training of medical personnel, as well as the teaching staff on the basis of the standards used for an undergraduate degree.
- Integrate reproductive and sexual health and rights in a subject standard of the Ministry of Education/KAE and Ministry of Youth, Labour and Migration.
- Develop and improve available training materials on integration and the promotion of sexual and reproductive health and rights in the curricula for youth in grades 7 through 11, including vocational technical education.

Priority intervention 5.1.2. Ensure guaranteed delivery of contraceptives and abortion services

Bottleneck: Lack of a mechanism for assured supply of contraceptives from the state budget, incomplete coverage of MHI (in terms of contraceptives) of the rural population and the informal sector, the mechanism for accounting/ reporting and planning of contraceptives against inadequate accounting of abortions and insufficient implementation of modern methods of safe abortion in HF.

Solution 1. Create and provide a mechanism for procurement of contraceptives through the state budget, improve planning, accounting and reporting mechanisms

Activities:

- Create and provide a mechanism for procurement of contraceptives by the state budget as well as funds of MHI for primary health care organizations (for 20 percent of vulnerable populations) and review accounting and reporting documentation on usage of contraceptives (planning, accounting and reporting).

Solution 2. Provide broad health coverage by RSH, PM, contraceptives for population and particularly for internal migrants and rural women

Activities:

- Develop and approve the criteria for identifying the vulnerable and disadvantaged population groups to target interventions with contraceptives (in association with LSG, MSD and MHIF).
- Distribute contraceptives at the FGP and FAP and RHC.

Solution 3. Ensure complete data collection on abortion and implement safe abortion (curettage, MVA, medical abortion) in health facilities (public and private)

Activities:

- Develop/improve the mechanism of control of completeness of data collection on abortion (curettage, MVA, medical abortion) in health facilities (public and private)
- Approve and implement clinical protocols (CP), monitor implementation of CP for safe abortion (MVA, medical abortion)

5.2. EFFECTIVE PERINATAL CARE

ANTENATAL CARE

Priority intervention 5.2.1. Improve the quality of antenatal services package

Bottleneck: The poor quality of ANC for pregnant women with high health and social risks (internal and external migrants, rural women, pregnant women, single women, women with large families, poor families, PLHIV)

Solution 1. Ensure the quality of laboratory diagnosis of pregnancy complications at primary health care level (FGC/FGP/FAP)

Activities:

- Optimize and rationalize laboratory service in the FGC and hospitals (master planning for PHC laboratory services at the national level); merge laboratories at the district level; regional integration and implementation of the public-private partnership mechanism at the national level.
- Provide free diagnosis through bacterial swab test in pregnant women at all levels of medical care.

- Analyse tests on the express diagnosis (proteinuria, glycosuria), ensure continuous purchase for FAP, FGP tests at the level of the HF on a tender basis.
- Provide the FGP and FAP with essential drugs and basic medical equipment.

Solution 2. Improve the quality of antenatal care of complications in FAP/FGP/FGC (room for pathology of pregnancy in FGC) and referral from the PHC to the inpatient level.

Activities:
- MH to disseminate at the national level the practice of continuous quality improvement in ANC, improve the system of quality management of internal services and external monitoring and evaluation of the quality of services at the inpatient level.
- Introduce a differentiated remuneration mechanism of the final result according to the level, scope and quality of services.

Priority intervention 5.2.2. Increase access to antenatal services package

Solution 1. Ensure the timely registration by increasing the capacity of family physicians and workers of FAP.

Activities:
- Increase responsibility and motivation of PHC professionals to provide a full package of antenatal services (integration of registration reporting form in complete package), improve/ revise economic incentive mechanism of medical specialists (RBF, ILD).
- Develop and approve the provision of delivery service coordinators, review the criteria of ILD and solve the issue of the promotion of maternal school instructors (at expense of ILD or special account).

Priority intervention 5.2.3. Increased awareness among the rural population of available prenatal services

Bottleneck: The low level of awareness of the population about uninsured pregnant women and parturient in Additional Package of MHI

Solution 1. Develop a unified strategy on informing the population about RSH

Activities:
- Develop, coordinate and enforce national RSH communication strategy (in Kyrgyz and Russian) within MAF (coordination meetings at the level of Deputy Prime Minister for Social Affairs) at least once a year.

Solution 2. Raise awareness of rural women, population, and internal migrants about their rights to the State-Guaranteed Benefits Package and Additional Package of MHI and about the danger signs of pregnancy and the post-partum period

Activities:
- Assess and make inventory of social and information, education and communication materials for the public and health professionals and social workers.
- Develop and broadcast TV programmes in accordance with the approved communication strategy (1 time per month for 1 hour), as well as rotating news clips daily at the national and regional levels.
- Conduct training for health promotion centres and RHC members on importance of informing pregnant women on their rights by SBP and the Additional Package of MHI (folic acid, iodine preparations and contraceptives); receiving the full package of antenatal services; the danger signs of pregnancy and the post-partum period.

CHILDBIRTH AND POST-PARTUM PERIOD

Priority intervention 5.2.4. Further expansion of effective perinatal care programme (EPC) (22 week + to 7 days)

Bottleneck: Lack of institutionalization of EPC in graduate education, including lack of institutional mechanisms for implementation and monitoring of clinical protocols

Solution 1. Expand the introduction of EPC in the country, to ensure the involvement of nursing staff.

Activities:

- Develop regulations defining the legal authority for strengthening of the role of nursing staff in monitoring and maintaining physiological pregnancy and childbirth, and the post-partum period (after physiological pregnancy and childbirth).
- Develop a mechanism for funding early hospitalization of pregnant women for childbirth in remote regions at the inpatient level (boarding stay), including meals, as well as for mothers, children in postnatal period.

Priority intervention 5.2.5. Improvement of the infrastructure and equipment of obstetrical facilities

Bottleneck: Lack of a secure environment for the delivery (water, light, heat) and the necessary conditions in FAP and FGP with beds

Solution 1. Provide a safe environment for childbirth (permanent water supply, drainage, light, heat), including FAP and FGP with beds

Activities:

- Involve LSG and LSA in ensuring basic conditions for safe delivery. Harmonization of laws 'On public health care' and 'On the fundamental principles of budgetary law', in respect of the granting LSG the right to allocate funds to support health care organizations (in WG to include representatives from the MF, the MHIF and LSG).
- The gradual reduction of hospital beds and the reinvestment in transportation and other needs (in WG of MH to include representatives of the MF and MHIF to discuss the mechanism for reinvestment).
- Finance the support systems and medical equipment and infrastructure repair in HF via the protected budget lines 'Infrastructure repair of HF' and 'Repair and maintenance of medical equipment in HF'.

Solution 2. The introduction of regionalization with the staff concerned, including the construction of perinatal centres in regions

Activities:

- Construction and equipping of perinatal centres in Bishkek (tertiary) and Osh, equipping maternity departments/units under SWAp in accordance with the level of perinatal care, development and ensuring information network.
- Plan and ensure funding for construction and equipping of perinatal centres in five oblasts, equipping maternity departments/units under SWAp in accordance with the level of perinatal care, development and ensuring information network.
- Creating motivation for young professionals to work in the regions, involving local authorities.

5.3. EMERGENCY OBSTETRIC CARE

Priority intervention 5.3.1. Quality management of EOC, provide necessary resources to support EOC

Bottleneck: Inadequate system of PHC to refer between primary, secondary and tertiary levels of perinatal care

Solution 1. Develop and adopt standards for complications of pregnancy and childbirth, including referral, transportation and consultative services.

Activities:
- Revise and approve in accordance with the level of service and the level of staffing of the tertiary maternity units of medical professionals and the secondary levels of perinatal care, provide funding in accordance with the approved staffing for the specified health organizations.
- Set up mechanisms for coordination and partnership (LSG, ME, MD) to transport critical cases of pregnancy and childbirth (elaborate a standard air ambulance and ME or MD).
- Purchase of specialized vehicles (47) for the transportation of pregnant women giving birth/parturient/puerperant in maternity wards and the tertiary and secondary level of perinatal care.

Priority intervention 5.3.2. Enhance the capacity of managers and staff of HF in EOC, leadership

Bottleneck: Low capacity of HF specialists (team of anesthesiologists, neonatologists, obstetricians, gynecologists and midwives, including in FAP/FGP with beds).

Solution 1. Improve the capacity of specialists and managers of HF in EOC (a team of anesthesiologists, obstetrician-gynecologists, midwives, neonatologists, including FAP/FGP with beds)

Activities:
- Create and implement a system of competitive selection of heads of health organizations on a contract basis and evaluate their activities on the basis of performance indicators of MCH

Priority intervention 5.3.3. Development and implementation of regulations, standards, clinical practice guidelines and tools for routine monitoring of the EOC

Bottleneck: Inadequate quality and unstable internal audit (NMCR, CQI, infection control, monitoring of operating status of auxiliary services, strengthening links with other HF)

Solution 1. Develop necessary guidance for EOC

Activities:
- Develop guidance on mentoring/leadership and monitoring tool for EOC in health care organizations.
- The team-oriented approach to health care organizations in critical obstetrical situations with timely direction and referral of patients to the appropriate level (the widespread adoption of methods of NMCR in all maternities).

Priority intervention 5.3.4. The introduction of the first interactive e-services in the Kyrgyz Republic (on the level of pilot projects) in all regions

Bottleneck: Lack of modern technologies in the transmission of information on the status of the pregnant patient during transition from the primary to the secondary/tertiary levels of care

Solution 1. Scale up and improve pilot projects to create and implement interactive e-health services in the Kyrgyz Republic

Activities:
- Implement nationwide an electronic version of the form 'Ambulatory medical card of the patient' and ensure its active use when referring patients.
- Inform patients about the results of their laboratory data (ultrasound, blood tests, urine, etc.) in electronic form, including SMS (at the level pilot projects).
- Organize distant e-learning courses for health professionals.

5.4. INTERSECTORAL SOLUTIONS

Priority intervention 5.4.1. Nationwide implementation of clinical protocols and training modules

Bottleneck: Insufficient implementation of training modules in PM, ANC, EPC, EOC in the curricula of educational institutions (pre-and post-graduate education) and limited implementation of clinical protocols (CP) in PM, ANC, EPC, EOC

Solution 1. Develop and implement an institutional mechanism for the implementation and monitoring of clinical protocols, evidence-based programmes

Activities:
- Institutionalize mechanisms of implementation of clinical protocols and monitoring of their implementation and revise the indicators of quality expertise of perinatal services of MHI (including PM and antenatal services).
- Integrate evidence-based programmes (PM, ANC, EPC, PNR, EOC, PMTCT) in training programmes of post-graduate educational establishment with obligatory learning and continuous improvement

Priority intervention 5.4.2. Increase of social support for pregnant women

Bottleneck: Lack of social support for pregnant women (especially among vulnerable categories)

Solution 1. Collect information on vulnerable categories of pregnant women to improve their access to social services (internal and external migrants, rural women, pregnant undocumented women, families with many children, single women from poor families, PLHIV)

Activities:
- Improve the system of social passport as a tool for gathering information on vulnerable categories of women, developing a mechanism for these categories in SGBP.
- Expand the professional responsibilities of public administration and LSG relating to registration of citizens, including the improvement of mechanisms of registration to PHC (database of registered population).
- Improve the mechanism of insurance of pregnant women and puerperant in order to ensure their access to the Additional Package of MHI with involvement of LSG bodies and social fund (land tax).

Solution 2. Expand the existing pilot projects on social support

Activities:
- Institutionalize the process of training social and health workers in basic social services for pregnant women on the basis of pilot projects.

- Ensure interaction of NGOs and local authorities in order to increase awareness of basic social services among vulnerable pregnant women (also on the basis of pilot projects).
- Develop a system of additional support for vulnerable pregnant women (additional meals, transportation, pharmaceuticals, etc.).

TABLE 5. PRIORITY SOLUTIONS

Priority interventions	Priority bottlenecks	Priority solutions	Activities
Reproductive health care			
Increase the involvement of young people in issues of RSH	**The lack of care focusing on adolescents and youth for education in area of reproductive and sexual health services (RSH), including information on family planning and contraception security.**	Ensure access of adolescents and youth to consultations in RSH and contraception security (including a network of youth-friendly clinics)	Approve regulations and ensure the expansion of the network of YFS at the primary level, develop and implement a mechanism to refer youth to YFS in the organizations of health service providers on reproductive health
			Scale up use of the interactive tool 'Road of Security' to work with youth in HPC and RHC.
			Develop and implement mechanisms for providing MHI service policies in health care organizations that provide services on RSH for street and vulnerable youth through the social protection system, NGOs and civil society (youth centres).
		Implement programmes on RSH in schools	Introduce YFS programme (including privacy, accessibility, comprehensiveness, advice and information), reproductive and sexual health, safe abortion services in the curricula of pre-and post-graduate training of medical personnel as well as teaching staff on the basis of the standards used for an undergraduate degree.
			Integrate reproductive and sexual health and rights in a subject standard ME/KAE and Ministry of Youth, Labour and Migration (AVE).
			Develop and improve available training materials on integration and the promotion of sexual and reproductive health and rights, in the curricula for youth in grades 7 to 11, including vocational technical education.

Priority interventions	Priority bottlenecks	Priority solutions	Activities
Reproductive health care			
Ensure guaranteed delivery of contraceptives with a simultaneous improvement of abortion	**Lack of a mechanism for assured supply of contraceptives at the expense of the state budget, incomplete coverage of MHI (in terms of contraceptives) of the rural population and the informal sector, the mechanism for accounting/reporting and planning of contraceptives against inadequate accounting of abortions and insufficient implementation of modern methods of safe abortion in HF.**	Create and provide mechanism for procurement of contraceptives by the state budget, improve planning, accounting and reporting mechanisms	Create and provide a mechanism for procurement of contraceptives by the state budget as well as funds of MHI for primary health care organizations (for 20 percent of vulnerable populations) and review accounting and reporting documentation on usage of contraceptives (planning, accounting and reporting).
		Provide broad health coverage by RSH, PM, contraceptives for population and particularly for internal migrants and rural women	Develop and approve the criteria for identifying the vulnerable and disadvantaged population groups to target interventions with contraceptives (in association with LSG, MSD and MHIF).
			Distribute contraceptives at the FGP and FAP and RHC
		Ensure complete data collection on abortion and implement safe abortion (curettage, MVA, medical abortion) in HF (public and private)	Develop/improve the mechanism of control of completeness of data collection on abortion (curettage, MVA, medical abortion) in HF (public and private)
			Approve and implement CP, monitor implementation of CP for safe abortion (MVA, medical abortion)
Effective perinatal care **Antenatal care**			
Improve the quality of antenatal services package	**The poor quality of ANC for pregnant women with high health and social risks (internal and external migrants, rural women, pregnant women, single women, women with large families, poor families, PLHIV)**	Ensure the quality of laboratory diagnosis of pregnancy complications in PHC (FGC/FGP/FAP)	Optimize and rationalize laboratory service in the FGC and hospitals (master planning for PHC laboratory services at the national level) and decide to merge laboratories at the district level, regional integration and implementation of PPP implementation mechanism at the national level.
			Resolve free diagnosis through bacterial swab test in pregnant women at all levels of medical care.
			Make analysis of tests on the express diagnosis (proteinuria, glycosuria); ensure continuous purchase for FAP, FGP tests at the level of the HF on a tender basis.
			Provide FGP and FAP with essential drugs and basic medical equipment.
		Improve the quality of antenatal care of complications in FAP/FGP/FGC (room for pathology of pregnancy in FGC) and referral from the PHC to the inpatient level.	MH to disseminate at the national level the practice of continuous quality improvement in ANC, improve the system of quality management of internal services and external monitoring and evaluation of the quality of services at the inpatient level.
			Introduce a performance based pay for specialists according to the level, scope and quality of services

Priority interventions	Priority bottlenecks	Priority solutions	Activities
Effective Perinatal Care Antenatal Care			
Increase access to antenatal services package.	**The poor quality of ANC for pregnant women with high health and social risks (internal and external migrants, rural women, pregnant women, single women, women with large families, poor families, PLHIV)**	Ensure timely registration by increasing the capacity of family physicians and workers of FAP.	Increase responsibility and motivation of PHC professionals to provide a full package of antenatal services (integration of registration reporting form in complete package), improve/revise economic incentive mechanism of medical specialists (RBF, ILD).
			Develop and approve the provision on delivery service coordinators, review the criteria of ILD and solve the issue of the promotion of maternal school instructors (at expense of ILD or special account).
Increase awareness among the rural population	**The low level of awareness about uninsured pregnant women's and parturients' rights to the Additional Package of MHI**	Develop a unified strategy on informing the population about RSH	Develop, coordinate and enforce national RSH communication strategy (in Kyrgyz and Russian) within MAF (coordination meetings at the level of Deputy Prime Minister for Social Affairs) at least once a year.
		Raise awareness of rural women, population, and internal migrants to ensure their rights in SBP, an Additional Package of MHI, to get the full package of antenatal services, about the danger signs of pregnancy and the post-partum period	Assess and make inventory of social spots and IEC materials for the public and health professionals and social workers
			Develop and broadcast TV programmes in accordance with the approved communication strategy (1 time per month for 1hour), as well as rotating news clips daily at the national and regional levels.
			Conduct training for health promotion centres and RHC members about importance of informing pregnant women of their rights to SBP and the Additional Package of MHI (folic acid, iodine preparations and contraceptives); receiving the full package of antenatal services; the danger signs of pregnancy and the post-partum period.
Childbirth and post-partum period			
Further expand the effective perinatal care programme (EPC) in order to improve the quality of perinatal care (22 week + to 7 days)	**Lack of institutionalization of EPC in graduate education, including lack of institutional mechanisms for implementation and monitoring of clinical protocols.**	Expand the introduction of EPC in the country, to ensure the involvement of nursing staff	Develop regulations defining the legal authority for the strengthening of the role of nursing staff in monitoring and maintaining physiological pregnancy and childbirth and the post-partum period (after physiological pregnancy and childbirth).
			Develop a mechanism for funding early hospitalization of pregnant women for childbirth in remote regions at the inpatient level (boarding stay), including meals, as well as for mothers, children in postnatal period.

Priority interventions	Priority bottlenecks	Priority solutions	Activities
Childbirth and post-partum period			
Improve the infrastructure and equipment of obstetrical facilities	**Lack of a secure environment for delivery (water, light, heat) and lack of the necessary conditions in FAP and FGP with beds.**	Provide a safe environment for childbirth (permanent water supply, drainage, light, heat) including FAP and FGP with beds	Involve LSG and LSA in ensuring basic conditions for safe delivery, harmonization of laws 'On public health care' and 'On the fundamental principles of budgetary law', in respect of the granting LSG the right to allocate funds to support health care organizations (in WG to include representatives from the MF, the MHIF and LSG).
			The gradual reduction of hospital beds and the reinvestment in infrastructure and other needs (in WG of MH to include representatives of the MF and MHIF to discuss the mechanism for reinvestment).
			Finance the support systems and medical equipment and infrastructure repair in HF via the protected budget lines 'Infrastructure repair of HF' and 'Repair and maintenance of medical equipment in HF'.
		The introduction of regionalization with the staff concerned, including the construction of perinatal centres in regions	Construction and equipping of perinatal centres in Bishkek (tertiary) and Osh, equipping maternity departments/units under SWAp in accordance with the level of perinatal care, development and ensuring information network.
			Plan and ensure funding for construction and equipping of perinatal centres in five oblasts, equipping maternity departments/units under SWAp in accordance with the level of perinatal care, development and ensuring information network.
			Motivate young professionals to work in the regions, involving local authorities.
Emergency obstetric care			
Quality management of EOC, provide necessary resources to support EOC	**Inadequate system of PHC to refer between primary, secondary and tertiary levels of perinatal care**	Develop and adopt standards for complications of pregnancy and childbirth, including referral, transportation and consultative services	Revise and approve in accordance with the level of service and the level of staffing of the tertiary maternity units of medical professionals and the secondary levels of perinatal care, provide funding in accordance with the approved staffing for the specified health organizations.
			Set up mechanisms for coordination and partnership (LSG, ME, MD) to transport critical cases of pregnancy and childbirth (elaborate a standard air ambulance and ME or MD).
			Purchase of specialized vehicles (47) for the transportation of pregnant women giving birth/parturient/puerperant in maternity wards and the tertiary and secondary level of perinatal care.

Priority interventions	Priority bottlenecks	Priority solutions	Activities
Emergency obstetric care			
Enhance the capacity of managers and staff of HF in EOC, leadership	**Low capacity of HF specialists (team of anesthesiologists, neonatologists, obstetricians, gynecologists and midwives, including in FAP/FGP with beds).**	Improve the capacity of specialists and managers of HF in EOC (a team of anesthesiologists, obstetrician-gynecologists, midwives, neonatologists, including FAP/FGP with beds).	Create and implement a system of competitive selection of heads of health organizations on a contract basis and evaluate their activities on the basis of performance indicators of MCH.
Develop and implement regulations, standards, clinical practice guidelines and tools for routine monitoring of the EOC	**Inadequate quality and unstable internal audit (NMCR, CQI, infection control, monitoring of operating status of auxiliary services, strengthening links with other HF).**	Develop necessary guidance for EOC.	Develop guidance on mentoring/leadership and monitoring tool for EOC in health care organizations.
			The team-oriented approach to health care organizations in critical obstetrical situations with timely direction and referral of patients to the appropriate level (the widespread adoption of methods of NMCR in all maternities)
Introduce the first interactive e-services in the Kyrgyz Republic (on the level of pilot projects) in all regions	**Lack of modern technologies in the transmission of information on the status of the pregnant patient during the transition from the primary to the secondary/tertiary levels of care**	Scale up and improve pilot projects to create and implement interactive e-health services in the Kyrgyz Republic.	Nationwide implementation of an electronic version of the form 'Ambulatory medical card of the patient' and ensure its active use when referring patients.
			Inform patients about the results of their laboratory data (ultrasound, blood tests, urine, etc.) in electronic form, including SMS (at the level pilot projects).
			Organize distant e-learning courses for health professionals.
Intersectoral solutions			
Nationwide implementation of clinical protocols and training modules	**Insufficient implementation of training modules in PM, ANC, EPC, EOC in the curricula of educational institutions (pre-and post-graduate education) and limited implementation of clinical protocols (CP) in PM, ANC, EPC, EOC.**	Develop and implement an institutional mechanism for the implementation and monitoring of clinical protocols, evidence-based programmes	Institutionalize mechanisms of implementation of clinical protocols and monitoring of their implementation and revise the indicators of quality expertise of perinatal services of MHI (including PM and antenatal services).
			Integrate evidence-based programmes (PM, ANC, EPC, PNR, EOC, PMTCT) in training programmes of post-graduate educational establishment with obligatory learning and continuous improvement

Priority interventions	Priority bottlenecks	Priority solutions	Activities
Intersectoral solutions			
Increase social support for pregnant women	**Lack of social support for pregnant women (especially among vulnerable categories)**	Collect information on vulnerable categories of pregnant women to improve their access to social services (internal and external migrants, rural women, pregnant undocumented women, families with many children, single women from poor families, PLHIV).	Improve the system of social passport as a tool for gathering information on vulnerable categories of women, developing a mechanism for these categories in SGBP.
			Expand the professional responsibilities of public administration and LSG relating to registration of citizens, including the improvement of mechanisms of registration to PHC (database of registered population).
			Improve the mechanism of insurance of pregnant women and puerperant in order to ensure their access to the Additional Package of MHI with involvement of LSG bodies and social fund (land tax).
		Expand the existing pilot projects on social support.	Institutionalize the process of training social and health workers in basic social services for pregnant women on the basis of pilot projects.
			Ensure interaction of NGOs and local authorities in order to increase awareness of the basic social services among vulnerable pregnant women (also on the basis of pilot projects).
			Develop a system of additional support for vulnerable pregnant women (additional meals, transportation, pharmaceuticals, etc.).

VI. ACTION PLAN TO ACCELERATE PROGRESS TOWARDS MDG 5

Photo: Aida Mambetkulova / UN Kyrgyzstan

The determining factors in the development of the Action Plan to accelerate progress towards MDG 5 in the Kyrgyz Republic is the evaluation of sources of financing of interventions proposed in each of the three strategic priorities outlined in Chapter 3. To this end, the existing funding sources and the additional funds required for successful implementation of the proposed solutions were estimated. This chapter contains a description of the current context in terms of financing the interventions aimed at achieving the MDGs, in particular, at reducing maternal mortality, and the methodology for calculating the required financial resources. The proposed Action Plan to accelerate progress towards MDG 5 based on three priority strategic interventions is based on sources of financing and financing gaps. In addition, taking into account the substantial number of required activities as well as government agencies involved in implementation of these activities, the proposed Action Plan was developed in line with the format of the Ministry of Economy and divided into two parts. The first part includes interventions that require substantial intersectoral liaison and includes issues that are beyond the health sector. The second part includes assignments of the Ministry of Health that should be completed as the preparatory phase for implementation of the Action Plan.

6.1. CURRENT CONTEXT OF FINANCING MATERNAL MORTALITY RELATED INTERVENTIONS

In the health care system of the Kyrgyz Republic, there are three main sources of funding: public, private and external. Public sources include the government budget (which includes spending on national and local budgets) replenished from general taxes and mandatory health insurance funds replenished from contributions to the payroll fund. Private funds include households' out-of-pocket payments (HOPP). External funding includes funds allocated by international organizations to the health care system of the Kyrgyz Republic (within the framework of the SWAp arrangement).

From 2000 to 2011, overall health care spending rose from KGS2.9 billion to KGS16.3 billion, which generates a nominal growth of 5.7 times. Hence, as the percentage to GDP, the cost of health care has increased from 4.4 percent up to 6.0 percent, respectively. By 2011, public funding (including MHI funds) was 3.5 percent of GDP compared to 2.1 percent in 2000, while private funds were 2.2 percent compared to 2.3 percent in 2000. In 2005-2006, the figure reached 3.5 percent; however, since 2007, there has been a reduction.

TABLE 6. **TOTAL HEALTH EXPENDITURES (KGS MILLIONS)**

	2000	2006	2007	2008	2009	2010	2011
Budget Fund Spending	1,248.2	2,421.0	2,966.9	3,873.0	4,809.1	5,276.8	8,327.2
MHIF	105.1	466.9	704.5	476.8	682.6	553.8	1,248.0
Private Expenses	1,521.4	3,921.9	4,398.4	4,823.2	5,356.6	5,671.7	6,096.2
SWAp		252.6	529.7	409.1	943.2	823.5	660.3
Total	**2,874.7**	**7,062.4**	**8,599.5**	**9,582.1**	**11,791.4**	**12,325.8**	**16,331.7**

Sources: NSC, MHIF, MH

Prior to 2008, in the structure of total health expenditure, the private expenses of the population increased, the dynamics of which evinced a sustained upward trend from 2000 to 2005 (from 52.9 percent to 59.2 percent). However, since 2006, the proportion of private spending tended to decline and, by 2010, had diminished to 38.5 percent of total health expenditure. The private expenses from 2000 to 2005 in real terms increased at a much faster pace (on average by 13.5 percent per year) versus government spending (on average by 7.9 percent per year), which led to the increase of its proportion in total health expenditure. From 2006 to 2011, the scope of government spending versus private expenses tended to accelerate (an average annual growth rate of 15.1 percent, while the private expenses during the period barely increased in real terms), which resulted in a diminished proportion of private spending in the structure of total health expenditure. As a result, in 2009, the share of public spending on health care for the first time exceeded the share of private expenses (46.6 percent versus 45.4 percent) and, by 2011, the excess of the share of public spending over the private spending totalled 21 percentage points.

This trend of health spending growth, particularly as regards to the growth of government spending, is quite positive. There have been several studies to assess the ongoing reforms within the framework *Manas* Programme that underscored some achievements in financing and restructuring; however, at the same time, they showed that the reforms have been implemented with insufficient funding. The lack of funding for health reform has limited the potential of reforms to impact the health outcomes and financial protection.

Hence, the issue of mother and child health care is part of the entire health care system; the financing of interventions focused on provision of health services to pregnant women is executed within the framework of the State-Guaranteed Benefit Programme to safeguard access of citizens

of the Kyrgyz Republic to health care (SGBP). The exceptions include some maternity hospitals in Bishkek, which are financed by the local budget.

In addition to the poor quality of health services, inadequate funding also makes patients resort to informal payments while seeking care at health facilities. The study on determining the financial gap of SGBP at the hospital level conducted in 2009 by the Ministry of Health, Mandatory Health Insurance Fund and Health Policy Analysis Project (WHO/DFID) showed that there are informal payments at birth in approximately 18 percent of cases.

To keep track of public spending earmarked for providing maternal health services, it is quite a challenge to have current financing arrangements in place. Table 4 presents the estimated funding data (excluding spending on maternity hospitals).

The following approach was used for the estimation:

1) For hospitals: number of births times the cost of treated case based on the ratio of Drug Related Group (DRG).
2) For PHC: number of registered pregnant women times the indicator of per capita financing.

The findings suggest that, from 2004 to 2011, the par value of financing of maternal health services increased from KGS213.5 million to KGS761.1 million. However, the situation is not so optimistic if one looks at the percentage ratio of this benchmark in the total government spending on health care. Thus, if the proportion of spending on maternal health was 9.9 percent in 2004, then this indicator had fallen to 7.9 percent by 2011. Given current circumstances, one can conclude that maternal health care-related interventions are underfunded; this, in turn, affects the quality of health services provided.

Financing challenges also include poor infrastructure of maternity hospitals, constraints with continuous supply of hot and cold water, electricity and heat supply, and sewerage system, all of which pose threats to safety (clean deliveries) and prevention of nosocomial infections. Under SWAP arrangements, the oblast maternity departments have been furnished with basic equipment worth US$2 million from 2010 to 2012. At the same time, the installed medical equipment in the facilities has not been used effectively due to the high turnover of skilled workforce, insufficient supplies of consumables, and unresolved issues of routine annual maintenance of medical equipment, including the procurement and delivery of spare parts and repairs.

TABLE 7. **SPENDING ON PREGNANCY MANAGEMENT AND OBSTETRIC CARE (KGS MILLIONS)**

	2004	2005	2006	2007	2008	2009	2010	2011
Maternity Hospitals (Bishkek city)	34.6	42.9	49.6	54.4	77.8	89.0	80.7	121.4
Maternity Units of Territorial Hospitals (TH)	133.6	124.4	143.5	179.5	244.4	317.3	553.8	577.8
Pregnancy Management at PHCs	45.2	45.5	48.0	51.4	53.2	59.0	61.1	62.0
Total on Mother's Health	**213.5**	**212.8**	**241.2**	**285.3**	**375.5**	**465.4**	**695.7**	**761.1**
Total Health Financing	**2.2**	**2.4**	**2.9**	**3 .7**	**4.4**	**5.5**	**5.8**	**9.6**
Percentage ratio versus the public spending on health care (in percent)								
Maternity Hospitals (Bishkek city)	1.6 %	1.8%	1.7%	1.5%	1.8%	1.6%	1.4%	1.3%
Maternity Units under TH	6.2%	5.2%	5.0%	4.9%	5.6%	5.8%	9.5%	6.0%
Management of Pregnancy (PHCs)	2.1%	1.9%	1.7%	1.4%	1.2%	1.1%	1.0%	0.6%
Total on Mother's Health	**9.9%**	**8.9%**	**8.4%**	**7.8%**	**8.6%**	**8.5%**	**11.9%**	**7.9%**

Source: MHIF, own estimates

6.2. METHODOLOGICAL ISSUES IN CALCULATING FINANCING NEEDS

The general approach of calculating the cost of achieving the MDGs should be based on the following phased calculation pattern. In the first phase, the key macroeconomic indicators are projected: economic growth and inflation rates, budget revenues and demographic indicators.

In the second phase, the financing needs of all interventions scheduled within the objectives for attaining each of the goals are estimated. In the third phase, the available funding and the focus of such funding are determined. The difference between the values derived in the second and third phases determines the financial gap in indicators or the fiscal deficit for financing the objectives, which should entail further fine-tuning of priority actions and recalculation of financial performance indicators at each phase of estimated calculation.

The needs of Kyrgyzstan in resources to achieve MDG 5 within the MAF plan can be estimated in two ways. First, the micro-approach can be used, which implies assessment of resources required for implementation of proposed intervention within the plan. The second approach is the macroeconomic approach, which is based on the use of correlations between the maternal mortality ratio and total health expenditure. These correlations are the consolidation of relevant data by countries that are at a level of development compatible with that of Kyrgyzstan. However, in this particular case, this approach is not acceptable because it is necessary to estimate the approximate cost of specific interventions.

Priority Areas and Interventions

The budget was calculated for the following priority areas that focused on reduction of maternal mortality. Each of the specified areas includes the whole range of interventions that provide detailed description of these areas and allow the estimation of required financial expenditures.

The microeconomic method is the primary method of calculation, whereby the funding scope is calculated directly, allowing for certain assumptions in terms of indicators related to MAF interventions to achieve MDG 5.

Assumptions used for calculations

The following assumptions were used while developing the methodology of calculations:

1) All calculations were made based on current costs of goods and services, with no account for inflation.
2) In calculating some of activities in which the costs of which were identified in USD, the exchange rate 48.5 KGS to USD was used.
3) In calculating some of the training and education of health workers, the estimated cost of expenditures per participant was used; this includes individual expenses (travel, per diem allowance, etc.), and general expenses (renting of conference room, stationery expenses, etc.).
4) It is assumed that, during the training and education of managers of health facilities, 20 participants will be covered on the average in each rayon of the country.
5) In order to calculate the cost of activities to be implemented by the staff members of the Ministry of Health, the mean value of remuneration is used, which is derived by dividing the total payroll of the Ministry by the number of employees.

6) In order to calculate the cost of interventions, which implies the engagement of local experts, the rates established by the World Bank for procurement procedures within the SWAp arrangement are used.
7) In order to calculate the cost of interventions associated with broadcasting of social clips on TV and radio, the rates of the Public TV and Radio Broadcasting Corporation (OTRK) were used.
8) In calculating the activities for construction of perinatal centres in the cities of Bishkek and Osh, three projects were due to be implemented from 2014 to 2016 with a total estimated cost of KGS1,128 million. The financing of the construction of perinatal centres is provided in bilateral agreements between the Government of the Kyrgyz Republic and the German Development Bank (KfW) and the World Bank (WB). Each of the projects will be implemented over two years, and their cost will be evenly distributed annually during implementation. The two projects will be implemented from 2014 to 2015 and the third project from 2015 to 2016. Based on the timelines of the third project, it is estimated that KGS564 million will be employed in 2016; accordingly, this amount was not included in the presented calculations.

TABLE 8. **AN ESTIMATED ASSESSMENT OF TOTAL FINANCING FOR MDG 5 (2013-2015)[70]**

Priority Areas	Financing Requirements	
	(KGS000s)	(USD000s)
1. Reproductive Health Care	24,347.0	502.0
2. Effective perinatal care	1 ,493,914.5	30,802.4
a. Antenatal Care	19,953.0	4 11.4
b. Birth and post-partum care	1,473,961.5	30,391.0
3. Emergency Obstetrics Care	61,909.0	1,276.5
4. Intersectoral solutions	8,207.0 1	69.2
Total	**1,588,377.5**	**32,750.1**

Source: Author's estimates

70. In this case, the point is not about the confirmed sources of financing and not about the potential of covering the financing needs, but about estimation of required financing.

Estimation of costs of financing MAF plan on MDG 5

Despite the fact that this calculation is tentative and should be updated following the new policy document on reducing maternal mortality, the final figures provide the overall picture of the required funding. Table 6 consolidates the main expenditures of achieving MDG 5. The total scope of financing for 2013-2015 makes about KGS1,588,377.5 thousand.

The following areas are particularly highlighted in the financing structure.[71]

1. Reproductive Health Care
2. Effective perinatal care including:
   A. Antenatal care
   B. Childbirth and Post-partum Care
3. Emergency Obstetrics Care
4. Intersectoral solutions

TABLE 9. **ESTIMATED COSTS OF INTERVENTIONS RELATED TO ACCELERATION TOWARDS MDG 5, BY YEARS**

Directions	Measurement unit	2013	2014	2015	Total
1. Reproductive Health Care	KGS000s	4,084.0	9,332.0	10,931.0	**24,347.0**
	USD000s	84.2	192.4	225.4	**502.0**
2. Effective perinatal care	KGS000s	7,034.5	616,853.5	870,026.5	**1,493,914.5**
	USD000s	145.0	12,718.6	17,938.7	**30,802.4**
a. Antenatal care	KGS000s	6,621.0	6,694.0	6,638.0	**19,953.0**
	USD000s	136.5	138.0	136.9	**411.4**
b. Childbirth and Post-partum Care	KGS000s	413.5	610,159.5	863,388.5	**1,473,961.5**
	USD000s	8.5	12,580.6	17,801.8	**30,391.0**
3. Emergency Obstetrics Care	KGS000s	1,859.0	59,050.0	1,000.0	**61,909.0**
	USD000s	38.3	1,217.5	20.6	**1,276.5**
4. Intersectoral solutions	KGS000s	824.0	5,783.0	1,600.0	**8,207.0**
	USD000s	17.0	119.2	33.0	**169.2**
Total	**KGS000s**	**13,801.5**	**691,018.5**	**883,557.5**	**1,588,377.5**
	USD000s	**284.6**	**14,247.8**	**18,217.7**	**32,750.1**

Source: Calculations of the experts' group

71. Annex 2 contains detailed estimations for each specified area.

Given current funding requirements, the distribution of expenditures by year shows that the major part of spending is slated for 2014-2015 (in total – 99 percent of the total funding requirements). The year 2013 accounts for only about 1 percent of the funding requirements because, during that year, most activities are preparatory (development of legal regulations, standards, etc.) and create conditions for interventions that will be implemented in subsequent years.

The required scope of financing for reproductive health care is estimated at KGS24347.0 thousand or 1.5 percent of the total financing requirements.

In order to finance the activities in effective perinatal care, KGS1,493,914.5 thousand, or 94.1 percent of total financing requirements, are required, which is associated with implementation of resource-intensive projects such as the construction of perinatal centres in the cities of Bishkek and Osh as well as the construction and supply of equipment to perinatal centres in the remaining five oblasts. The cost of these projects' implementation will total some KGS1.5 billion between 2014 and 2015. The construction of perinatal centres will be financed from donor aid.

The implementation of activities under the emergency obstetric care requires KGS61,909.0 thousand or 3.9 percent of total financing.

Financing of 'intersectoral solutions' requires KGS8,207,0 thousand that makes 0.5 percent which is due to main activities are focused on creation of normative basis and mechanisms to support pregnant women.

Identifying the financial gap and sources of funding to fill such gaps

In general, most funding requirements have been confirmed and it is accordingly expected that the financial gap between resource requirements and the potential of their funding will be relatively insignificant. The identification of activities with confirmed sources of funding, the scope of a financing gap and the sources of their funding require further refinement; however, this document provides general provisions on these issues.

As stated above, the confirmed sources of funding include projects for the construction of perinatal centres in the cities of Bishkek and Osh, which lay claim to the overwhelming share of financing requirements. Also, in the proposed Action Plan, there is a whole range of interventions whose implementation requires the involvement of government officials in the health, education and other sectors. and, as a result, their engagement in these efforts will be carried out within the framework of their functional responsibilities and will be financed from the government budget. These categories may also fall under the confirmed funding.

TABLE 10. **ASSESSMENT OF THE FINANCIAL GAP TO IMPLEMENT ACTIVITIES TOWARDS MDG 5 (2013-2015)**

Direction	KGS000s	USD000s
Total required funds	1,588,377.5	32,750.1
State budget	4,660.5	96.1
Perinatal centre construction projects	1,525,784	31,459.5
Financial gap	57,933.0	1,184.7

In terms of the financial gap based on current estimates, its scope will tentatively encompass KGS57.9 million. In order to fill theses gaps, the following sources of funding can be used:

1) The Government Budget: Because the *Den Sooluk* Programme does not provide for a substantial increase in health care financing due to the government budget funds (the target indicator for 2012-2016 remains unchanged at the level of 13 percent of overall public spending), a possible solution involves streamlining public spending on health to enable the reinvestment of the released funds for development of more effective functions of health care delivery (for example, the funds released due to downsized beds in FGPs can be used for for transportation of pregnant/parturient women to health facilities at the secondary and tertiary levels).

2) Donor Aid under Parallel Financing: Some development partners still continue providing assistance in reforming the health sector through direct financing of specific projects. Certain parts of interventions can be financed within this arrangement.

Den Sooluk for 2012 to 2016 provides funding for mother and child health care from the funds received from development partners as part of the SWAp. It is expected that this amount will be around US$1.7 million (or KSG84 million). This funding includes implementation of the action plan of *Den Sooluk* and will cover the needs of the MAF Action Plan for MDG 5. However, the MAF Action Plan of for MDG 5 includes a wider range of issues, including intersectoral solutions, thus complementing the activities that have been approved in *Den Sooluk*, which, in turn, leads to the need to raise additional funds for their implementation.

TABLE 11. **FUNDING FOR MOTHER AND CHILD HEALTH UNDER THE DEN SOOLUK PROGRAMME (2012-2016)**

Direction	KGS000s	USD000s
Involve civil society in educating women and their families about the prevention of anaemia, maternal nutrition, danger signs of pregnancy, the need for timely treatment in the health care system to get guaranteed services	14,603.4	301.1
Provide antenatal care (ANC) at the primary health care level	11,077.4	228.4
Family planning services, counselling in preparation of women for childbirth and danger signs of pregnancy	12,556.7	258.9
Activities to reduce the risk of maternal and infant mortality in maternity institutions	3,123.4	64.4
Reduce cases of post-partum hemorrhage by routine use of active management of the third stage of labour, monitoring, improvement of skills and knowledge of post-partum bleeding, and use of effective medications to stop bleeding	4,423.2	91.2
Improve the management of women with severe pre-eclampsia and eclampsia by ensuring high-quality emergency obstetric care	5,955.8	122.8
Reduce the incidence of post-partum septic complications through the introduction of PAP, the reduction of unnecessary studies during childbirth, with adequate antibiotic treatment, and improvement of registration of all cases of post-partum septic complications	7,061.6	145.6
Improve emergency medical assistance to pregnant women on the stage of transportation by Ambulance Brigade (AB) to hospital	25,234.6	520.3
Total	**84,036.0**	**1,732.7**

Points of Assignments to the Ministry of Health of the Kyrgyz Republic:

1. To develop/upgrade the mechanism of control of completeness of data collection on abortion (curettage, MVA, drug-induced) at HOs (public and private), including the development of a computerized programme.
2. To revise reporting form of PHC and medical card of the pregnant women to keep at home (Form 12 and 12-zdrav, Form 31)
3. To enforce a mechanism to monitor cases of complications of gestation at PHCs (including FAPs/FGPs) by arranging units for pregnancy pathology at FMC (to develop the regulation on the pregnancy pathology unit and functional responsibilities of such unit's staff).
4. To develop a mechanism for testing health professionals within the attestation of professionals, conduct the attestation of doctors and nurses (once every three years through a testing centre).
5. To integrate the training module on management of health care quality of HOs in ongoing courses for training managers and professionals (KSMIT&CR, Kyrgyz State Medical Academy) and training of all HO managers (on proper maintenance and operation of available medical equipment, rational use of human resources, infrastructure, on clinical, drug and financial management, EOC), testing of HO managers.
6. To continue activities on further mainstreaming of PMTC services within the antenatal care with the focus on women from vulnerable groups of population (IDUs, focus on STIs, HIV).
7. To mainstream training process practice on ANC continuous quality improvement system nationwide (currently, they are introduced in 13 rayons of the country), to upgrade the system of internal quality control at HOs, external monitoring and evaluation of quality of services at hospitals.
8. To train the team of professionals on EOC modules (thematic training on EOC in each HO, including FAPs/FGPs with beds) and ensure resources for EOC (vacuum extractors, dummies and mannequin).
9. To ensure team-based approach of HO staff members in near-miss obstetrics cases with timely referral and re-referral of patients to respective level under the mandate of HO manager (mainstreaming of NMCR approaches in all obstetrics facilities).

6.3. THE ACTION PLAN TO ACCELERATE PROGRESS TOWARDS MDG 5

Priority Interventions	Priority bottlenecks	Priority Solutions
1. Reproductive Health Care		
Increase the involvement of young people in reproductive and sexual health (RSH). **Estimated required funds:** **2013 – USD 68,306** **2014 – USD 93,666** **2015 – USD 93,972**	**The lack of care focusing on adolescents and youth for education in area of reproductive and sexual health services (RSH), including information on family planning and contraception security**	Ensure access of adolescents and youth to consultations on RSH and reproductive security (including a network of youth-friendly clinics).
		Implement programmes on RSH in schools.

	Activities	Timeframes	Indicators	Principal Implementer
	Approve regulations and ensure the expansion of the network of YFS at the primary level, develop and implement a mechanism to refer youth to YFS in the organizations of health service providers of reproductive health.	2013-2015	Number of established and existing YFS in rural areas and coverage of youth with RSH services	MH KR, MYL&M, public and private sectors, NGOs, multimedia materials in national and oblast mass media, through youth organizations and centres, development partners
	Scale up use of the interactive tool 'Road of Security' work with youth in HPC and RHC.	2013-2015	The number and coverage of youth with RSH services	MHI, MH, MSD
	Develop and implement mechanisms for providing MHI service's policies in health care organizations that provide RSH services for street and vulnerable youth through the social protection system, NGOs and civil society (youth centres).	2014-2015	The number of street and vulnerable youth, covered by services through such policies	KSMIRCME, KSMA, HEE, MH, ME&S, MYL&M, private sectors, professional associations, development partners (upon agreement)
	Introduce YFS programmes (including about confidentiality, access, integrated and consulting services on reproductive and sexual health, safe abortion services) in pre- and post-graduate curricula for the training of health professionals and teaching staff based on standards used for bachelor's degree training.	2013-2015	Ongoing curricula on YFS in courses of the Kyrgyz State Medical Institute for Training and Continuous Training (KSIRCME) The number of trained personnel working with children and youth The results of M&E of the quality of services (YFS) in health organizations	KSMIRCME, KSMA, HEE, MH, ME&S, MYL&M, private sector, professional associations, development partners (upon agreement)
	Integrate reproductive and sexual health and rights-related issues into subject standards of ME&S KR/KAE and MYL&E (AVE)	2013-2015	The number of training materials, subject-related standards	

Priority Interventions	Priority bottlenecks	Priority Solutions
1. Reproductive Health Care		
Ensure guaranteed delivery of contraceptives and improvement of safe abortion services. **Estimated required funds:** **2013 – USD 15,215** **2014 – USD 97,182** **2015 – USD 129,576**	**Lack of a mechanism for assured supply of contraceptives at the expense of the state budget, incomplete coverage of MHI (in terms of contraceptives) for the rural population and the informal sector, lack of a mechanism for the accounting/reporting and planning of contraceptives, inadequate accounting of abortions and insufficient implementation of modern methods of safe abortion in HF**	Create and provide mechanism for procurement of contraceptives by the state budget, improve planning, accounting and reporting mechanisms
		Ensure wide coverage of RSH services, FP, and CA among population and, in particular, internal migrants and rural women.
		Ensure the entirety of collected data on abortions (curettage, MVA, drug-induced) at the level of HO (public and private)

	Activities	Timeframes	Indicators	Principal Implementer
	Develop and upgrade the training material on integration and promotion of reproductive and sexual health and rights-related issues into the curricula of youth in grades 7 to 11, including vocational education and training (VET). Create and provide mechanism for procurement of contraceptives through the state budget and funds of MHI for primary health care organizations (for 20 percent of vulnerable populations) and review accounting and reporting documentation concerning usage of contraceptives (planning, accounting and reporting).	2013-2015 2013-2015	Indicators: The number of training materials used for integration and promotion of sexual and reproductive health and rights-related issues into the curricula of youth in grades 7 to 11, including vocational education and training (VET) 1. Availability of CA at PHC facilities procured at the expense of public budget and MHIF funds for 20 percent of vulnerable population Availability of revised recording and reporting forms for using CA (planning, recording and reporting) for public and private HOs	ME&S, MH KR, professional associations, NGO (upon agreement) Government of Kyrgyz Republic, MF, MH KR, MSP, RMIC, UNFPA, development partners (upon agreement)
	Develop and approve criteria for identification of vulnerable and low-income groups for targeted interventions of contraceptive supply (jointly with LSGS, MSP and MHIF).	2013	Availability of developed criteria for identifying vulnerable and low-income groups for targeted interventions for supply of contraceptives	MH KR, MSP, MYL&E, MHIF, LSGs, NGOs, development partners (upon agreement)
	The distribution of contraceptives at FGP, FAP and RHC	2013-2015	Share of contraceptives distributed by FGP, FAP and RHC	MH KR, MSP, MYL&E, MHIF, LSGs, NGO, development partners (upon agreement)
	Develop and upgrade the mechanism for control of all data on abortions (curettage, RVA, drug-induced) at the level of HO (public and private).	2013-2015	Availability of revised reporting and recording forms for public and private health organizations Installed electronic data collection software concerning abortions	MH KR, RMIC, private sector, development partners (upon agreement)

Priority Interventions	Priority bottlenecks	Priority Solutions
2. Effective perinatal care **2.1 Antenatal care**		
Improve the quality of antenatal services package. **Estimated required funds:** **2013 – USD 18,733** **2014 – USD 16,524** **2015 – USD 23,723**	**Poor quality of ANC for pregnant women with high health and social risks (internal and external migrants, rural women, pregnant women, single women, women with large families, poor families, PLHIV)**	Ensure the quality of laboratory diagnosis of pregnancy complications in PHC (FGC/ FGP/FAP).
		Improve the quality of antenatal care of complications in FAP/FGP/FGC (room for pathology of pregnancy in FGC) and referral from the PHC to the inpatient level.
Increase access to antenatal services package. **Estimated required funds:** **2013 – USD 2,209** **2014 – USD 9,367**		Ensure timely registration by increasing the capacity of family physicians and FAP workers.

	Activities	Timeframes	Indicators	Principal Implementer
	Optimize and rationalize laboratory service in FGC and hospitals (master-planning for PHC laboratory services at the national level) and decide to merge laboratories at the district level, regional integration and implementation of PPP implementation mechanism at the national level.	2013-2015	Approved master plan on streamlining and rationalizing laboratory services in the country	MH KR, MHIF, FGPA, KSIRCME, development partners (upon agreement)
	Resolve free diagnosis through bacterial swab test in pregnant women at all levels of medical care.	2013-2015	The proportion of pregnant women who receive bacteriological inoculation of urine done for bacteriuria	MHIF, MH KR, FGPA, KSIRCME, development partners (upon agreement)
	Review the required number of tests for rapid testing for one year (proteinuria, glucosuria), procurement and uninterrupted supply of tests to FAP and FGP through bidding arrangements.	2013-2015	Availability of rapid tests at PHC facilities (including FGP and FAP) (proteinuria, glucosuria) through bidding arrangements	MHIF, MH KR, Department for Provision of Drugs and Medical Equipment (DPD&ME), FGPA, development partners (upon agreement)
	Provide FGP and FAP with essential drugs and basic medical equipment.	2013-2015		
	MH to disseminate at the national level the training process of continuous quality improvement in ANC, improve the system of quality management of internal services and external monitoring and evaluation of the quality of services at the inpatient level.	2013-2015	Nationwide mainstreaming of CQIS on ANC	MH KR, KSIRCME, MAC, professional associations, AH, FGPA, development partners (upon agreement)
	Introduce a differentiated remuneration mechanism of the final result and according to the level, scope and quality of services.	2013-2015	Availability of adapted DRG in ANC	MHIF, MH KR, AH, AFGP and development partners (upon agreement)
	Increase responsibility and motivation of PHC professionals to provide a full package of antenatal services (integration of registration reporting form in complete package), improve/revise economic incentive mechanism for medical specialists (RBF, ILD).	2013-2015	The proportion of pregnant women who have accessed the full range of antenatal services (five visits, gravidogram, bacteriuria, consulting) Availability of revised and approved mechanism of economic incentives of PHC health professionals	MHIF, MH KR, FGPA, KSIRCME, development partners (upon agreement)

Priority Interventions	Priority bottlenecks	Priority Solutions
2. Effective perinatal care **2.1 Antenatal care**		
		Ensure timely registration by increasing the capacity of family physicians and FAP workers.
Increase awareness among the rural population. **Estimated required funds:** **2013 – USD 114,464** **2014 – USD 111, 008** **2015 – USD 112,031**	Low level of the population awareness of the existing Additional Package of MHI for pregnant women and childbirth	Develop a unified strategy for informing the population about RSH.
		Raise awareness of rural women, population, and internal migrants about the danger signs of pregnancy and the post-partum period to ensure their rights in SBP and their receipt of the Additional Package of MHI to get the full package of antenatal services.

	Activities	Timeframes	Indicators	Principal Implementer
	Develop and approve the provision of delivery service coordinators, review the criteria of ILD and solve the issue of the promotion of maternal school instructors (at expense of ILD or special account).	2013-2015	Revised and approved regulations for service delivery coordinators, revised criteria for the calculation of ILD to instructors of future mothers school	MHIF, MH KR, FGPA, KSIRCME, development partners (upon agreement)
	Develop, coordinate and enforce national RSH communication strategy (in Kyrgyz and Russian) within MAF (coordination meetings at the level of Deputy Prime Minister for Social Affairs) at least once a year.	2013-2015	Approved strategy or unified intersectoral or intersectoral plan of action to raise popular awareness	Vice Prime-Minister on Social Affairs, authorized representatives of oblasts, MH KR, Ministry of Culture, Information and Tourism, OTRK, ELTR, public and private media, internet sites (according to the law), MHIF, ME&S, MSP, MYL&E, MF, LSA and LSG, NGOs, development partners (upon agreement)
	Assess and take inventory of social spots and IEC materials for public and health professionals and social workers.	2013	1. Available resources and funding to promote content-products through donor financing and partial contribution of budget funds (including local) 2. Quantity and quality of materials and content-products used by media with respect to RSH	
	Produce programmes on topics of approved communication strategy (once per month for one hour), daily rolling of information clips at national and oblast levels.	2013-2015	Five percent of air time during prime time in public and private media	
	Conduct training for health promotion centres and RHC members on importance of informing pregnant women about their rights through SBP and the Additional Package of MHI (folic acid, iodine preparations and contraceptives); about receiving the full package of antenatal services; and about the danger signs of pregnancy and the post-partum period.	2013-2015	The number of routine programmes in media, number of trained staff members of Health Promotion Units and members of Rural Health Committees (RHC) on topics	

Priority Interventions	Priority bottlenecks	Priority Solutions
2.2 Childbirth and post-partum care		
Scale up Effective Perinatal Care Programme (22 weeks + up to 7 days). **Estimated funds:** **2013 – USD 736.236** **2014 – USD 51,598** **2015 – USD 43,683**	Lack of institutionalization of EPC in graduate education, including lack of institutional mechanisms for implementation and monitoring of clinical protocols	Expand the introduction of EPC to ensure the involvement of nursing staff.
Improve the infrastructure and equipment of obstetrical facilities. **Estimated required funds:** **2013 – USD 77,203** **2014 – USD 124,267,741** **2015 – USD 176,134,748**	Lack of a secure environment for delivery (water, light, and heat) and the necessary conditions in FAP and FGP with beds	Ensure safe conditions for deliveries (uninterrupted water supply, sewerage, electricity, heating), including FAP and FGP with beds.

	Activities	Timeframes	Indicators	Principal Implementer
	Develop regulations defining the legal authority for strengthening the role of nursing staff in monitoring and maintaining physiological pregnancy and childbirth, and the post-partum period (after physiological pregnancy and childbirth).	2013-2015	1. Enforced regulatory documents defining legal authority to strengthen the role of health workers in te monitoring and managing physiological gestation and birth as well as puerperium (post-physiological gestation and birth). 2. The number of nurses trained in EPC and practicing safe technologies	MH KR, MHIF, professional associations, HA, FGPA, development partners (upon agreement)
	Develop a funding mechanism for early hospitalization of pregnant women for childbirth in remote regions at the inpatient level (boarding stay), including meals, as well as for hospitalization of mothers and children in postnatal period.	2014-2015	A funding mechanism for early hospitalization of pregnant women for childbirth in remote regions at the inpatient level (boarding stay), including meals, as well as for hospitalization of mothers and children in postnatal period.	MH KR, MHIF, professional associations, HA, FGPA, development partners (upon agreement)
	Involve LSG and LSA in ensuring basic conditions for safe delivery (harmonization of laws 'On public health care' and 'On the fundamental principles of budgetary law' with respect to granting LSG the right to allocate funds to support health care organizations) (in WG to include representatives from the MF, the MHIF and LSG).	2014	Adoption of amendments to the laws 'On public health care' and 'On the fundamental principles of budgetary law'	MH KR, MF, MHIF, MF, LSA, LSG
	Gradually reduce hospital beds and reinvestment in necessary infrastructure and other needs (in WG of MH to include representatives of the MF and MHIF to discuss the mechanism for reinvestment).	2014	The decreased number of FAP/FGP with maternity wards and reinvestment of reconciled funds in transportation services	MH KR, MF, MHIF, MF, LSA, LSG
	Finance the support systems and medical equipment and infrastructure repair in HF via the protected budget lines 'infrastructure repair of HF' and 'repair and maintenance of medical equipment in HF'.	2013-2015	Financing the support systems and medical equipment and infrastructure repair in HF via the protected budget lines 'infrastructure repair of HF' and 'repair and maintenance of medical equipment in HF'	MH KR, MF, MHIF, MF, LSA, LSG

Priority Interventions	Priority bottlenecks	Priority Solutions
2.2 Childbirth and post-partum care		
	Lack of a secure environment for delivery (water, light, and heat) and the necessary conditions in FAP and FGP with beds	Introduce regionalization among relevant staff, including the construction of perinatal centres in regions.
3. Emergency obstetric care		
Quality management of EOC, provide necessary resources to support EOC. **Estimated required funds:** **2013 – USD 6,299** **2014 – USD 1,190,233**	Inadequate system of PHC to refer among primary, secondary and tertiary levels of perinatal care	Develop and adopt standards for complications of pregnancy and childbirth, including referral, transportation and consultation services.

	Activities	Timeframes	Indicators	Principal Implementer
	Construct and equip perinatal centres in Bishkek (tertiary) and Osh, equip maternity departments/units under SWAp in accordance with the level of perinatal care, development and ensuring of information network.	2013-2015	The perinatal centres in Bishkek and Osh equipped under SWAp and put into operation	MF, MH KR, MHIF, development partners (upon agreement)
	Plan and ensure funding for construction and equipping of perinatal centres in five oblasts, equipping maternity departments/ units under SWAp in accordance with the level of perinatal care, development and ensuring of information network.	2013-2015	The perinatal centres in five oblasts equipped under SWAp and put into operation	MF, MHIF, MH KR, development partners (upon agreement)
	Create incentives for young professionals to work in the regions, involving local authorities.	2013-2015	Number of young professionals working in the regions	MH KR, MF, MHIF, MF, LSA, LSG
	Revise and approve, in accordance with the level of service and the level of staffing of the tertiary maternity units of medical professionals and the secondary levels of perinatal care, provide funding in accordance with approved staffing for the specified health organizations.	2013-2015	Availability of developed and approved medical specialists/transport brigades in maternity departments of tertiary and secondary levels of perinatal care, funded	MH KR, MF KR, MHIF, professional associations, HA, FGPA, development partners (upon agreement)
	Set up mechanisms for coordination and partnership (LSG, ME, MD) to transport critical cases of pregnancy and childbirth (develop a standard air ambulance and ME or MD).	2013-2014	The number of performed transportations of pregnant/parturient/ puerperant women in near-miss conditions to higher level of perinatal care delivery with the support of LSGs, MES, MD	MH KR, MF KR, MHIF, professional associations, HA, FGPA, development partners (upon agreement)
	Purchase 47 specialized vehicles for the transportation of pregnant women giving birth/parturient/ puerperant to maternity wards at the tertiary or secondary level of perinatal care.	2013-2015	1. The number of transportation of maternity/ pregnant/post-partum women to a higher level of perinatal care 2. The number of completed transportation of newborns to a higher level of perinatal care	MH KR, MF KR, MHIF, professional associations, HA, FGPA, development partners (upon agreement)

Priority Interventions	Priority bottlenecks	Priority Solutions
3. Emergency obstetric care		
Enhance the capacity of managers and staff of HF in EOC, leadership. **Estimated required funds:** **2013 – USD 4,356**	Low capacity of HF specialists (team of anesthesiologists, neonatologists, obstetricians, gynecologists and midwives, including in FAP/FGP with beds)	Improve the capacity of specialists and managers of HF in EOC (a team of anesthesiologists, obstetrician-gynecologists, midwives, neonatologists, including FAP/FGP with beds).
Develop and implement regulations, standards, clinical practice guidelines and tools for routine monitoring of EOC. **Estimated required funds:** **2013 – USD 8,589** **2014 – USD 12,270** **2015 – USD 15,338**	Inadequate quality and unstable internal audit (NMCR, CQI, infection control, monitoring of operating status of auxiliary services, strengthening links with other HF).	Develop necessary guidance for EOC.
Introduce the first interactive e-services in the Kyrgyz Republic (on the pilot project level) in all regions. **Estimated required funds:** **2013 – USD 18,774** **2014 – USD 5,113** **2015 – USD 5,113**	Lack of modern technologies in the transmission of information about the status of pregnant patient during transition from primary to secondary/tertiary levels of care	Scale up and improve pilot projects to create and implement interactive e-health services.
4.Intersectoral solutions		
Implement clinical protocols and training modules nationwide. **Estimated required funds:** **2013 – USD 8,426** **2014 – USD 13,252**	Insufficient implementation of training modules in PM, ANC, EPC, and EOC in the curricula of educational institutions (pre- and post-graduate education) and limited implementation of clinical protocols (CP) in PM, ANC, EPC, EOC.	Develop and implement an institutional mechanism for the implementation and monitoring of clinical protocols, evidence-based programmes.

	Activities	Timeframes	Indicators	Principal Implementer
	Create and implement a system of competitive selection of heads of health organizations on a contract basis and evaluate their activities on the basis of performance indicators of MCH.	2013-2015	1. The number of managers, selected on a contract basis 2. The number of managers who have not completed an assessment of their activities through the implementation of strategic indicators of MCH	MH KR, MF KR, MHIF, professional associations, HA, FGPA, development partners (upon agreement)
	Develop guidance on mentoring/ leadership and monitoring tool for EOC in health care organizations.	2013-2015	1. Availability of developed guidelines on mentorship/ supervision in maternity units 2. Availability of approved tool for EOC monitoring in health organizations	MH KR, MF KR, MHIF, professional associations, HA, FGPA, development partners (upon agreement)
	Ensure team-oriented approach to health care organizations in critical obstetrical situations with timely direction and referral of patients to the appropriate level (the widespread adoption of methods of NMCR in all maternities).	2013-2015	The number of near-miss cases with successful outcomes and their trends	MH KR, MHIF, professional associations, HA, FGPA, development partners (upon agreement)
	Implement nationwide electronic version of the form 'Ambulatory medical card of the patient' and ensure its active use when referring patients.	2013-2015	Availability of e-card recording in all health care organizations	MH KR, MHIF, development partners (upon agreement)
	Ensure that patients are informed about the results of their laboratory data (ultrasound, blood tests, urine, etc.) in electronic form, including SMS (at the level of pilot projects).	2013-2015	Introduction of SMS messaging at PHC facilities (at pilot facilities) including providing information on ultrasound investigation, proteinuria, and glucosuria	MH KR, MHIF, development partners (upon agreement)
	Organize e-learning courses for health professionals.	2013-2015	Availability of e-learning courses	MH KR, KSIRCME, MAC, professional associations, AH, FGPA, development partners (upon agreement)
	Institutionalize mechanisms of implementation of clinical protocols and monitoring of their implementation and revise the indicators of quality of perinatal services of MHI (including PM and antenatal services).	2013-2015	Revised and agreed expert assessment of the quality of perinatal services by MHIF (including antenatal services)	MHIF, MH KR, YFU, KSIRCME, KSMA, MAC, professional associations, development partners (upon agreement)

Priority Interventions	Priority bottlenecks	Priority Solutions
4.Intersectoral solutions		
Increase social support for pregnant women. **Estimated funds:** **2013 – USD 8,426** **2014 – USD 105,016** **2015 – USD 32,722**	Lack of social support for pregnant women (especially among vulnerable categories)	Collect information on vulnerable categories of pregnant women to improve their access to social services (internal and external migrants, rural women, pregnant undocumented women, families with many children, single women from poor families, PLHIV).
		Expand existing pilot projects for social support.

	Activities	Timeframes	Indicators	Principal Implementer
	Integrate evidence-based programmes (PM, ANC, EPC, PNR, EOC, PMTCT) into training programmes of post-graduate educational establishments with obligatory learning and continuous improvement.	2013-2015	Revised pre- and post-graduate training programmes at higher education institutions	MHIF, MH KR, YFU, KSIRCME, KSMA, MAC, professional associations, development partners (upon agreement)
	Improve the system of social passport as a tool for gathering information on vulnerable categories of women, developing a mechanism for these categories in SGBP.	2013-2015	1. The electronic system of social passport is available. 2. Vulnerable groups are included in SBP	MHIF, MH KR, YFU, KSIRCME, KSMA, MAC, professional associations, development partners (upon agreement)
	Expand the professional responsibilities of public administration and LSG relating to registration of citizens, including the improvement of mechanisms of registration at PHC (database of the registered population).	2013-2015	The revised mechanism of registration and data collection for the population enrolled in PHC	MHI, MSD, SF, MH, LSG, civil society, development partners (upon agreement)
	Improve the mechanism for insurance of pregnant women and puerperant in order to ensure their access to the Additional Package of MHI with involvement of LSG bodies and social fund (land tax).	2013-2015	The insurance mechanism of unemployed pregnant women and parturient (or of those working in the informal sector) is in place	MHI, MSD, SF, MH, LSG, civil society, development partners (upon agreement)
	Institutionalize the process of training social and health workers in basic social services for pregnant women on the basis of pilot projects.	2013-2015	Training plan is available.	MSD, MH, LSG, LSA, development partners
	Ensure interaction of NGOs and local authorities in order to increase vulnerable pregnant women's awareness of basic social services (also on the basis of pilot projects).	2013-2015	1. Number of NGOs and LSG (especially in areas with high levels of poverty, Naryn, Talas and Batken) that implement projects to raise awareness of basic social services available to vulnerable populations 2. Assessment of awareness by interviewing vulnerable groups	MSD, NGO, LSG, LSA, development partners
	Develop a system of additional support for vulnerable pregnant women (additional meals, transportation, pharmaceuticals, etc.).	2013-2015	The system of additional social support in pilot regions and villages is available.	MSD, MH, LSG

6.3. MONITORING AND EVALUATION OF IMPLEMENTATION OF PLAN OF ACTIONS TO ACCELERATE PROGRESS TOWARDS MDG 5

Monitoring and evaluation of implementing the Action Plan to accelerate progress towards MDG 5 will be conducted in three areas:

1. intervention implementation
2. project implementation
3. progress towards the target benchmarks

The monitoring will be conducted on a quarterly basis and the evaluation of action plans will be conducted not less than semi-annually.

Intervention Implementation

There will be monitoring of each intervention's implementation versus the intended outcome of interventions in terms of performance. At the same time, performance will be evaluated in terms of certain quality outcomes that are ensured by integrating the performance indicators for each activity.

Project Implementation

The Action Plan includes several investment projects. In addition to tracking these projects within implementation of activities, the separate performance monitoring patterns of these investment projects will be drafted and approved.

Progress towards Targets

The backbone of a set of indicators are the MDG 5 target indicators, except for the proportion of births attended by skilled health personnel (in percent). As previously noted, several factors sugggest that this indicator is not optimal for tracking progress towards this target.

The core M&E target indicators include:

1. The maternal morality indicator per 100,000 live births
2. The proportion of pregnant women ill with aneamia, in percent
3. The proportion of women of reproductive age using contraceptives, in percent

Given the unattainability of MDG 5 target indicators, this report proposes to set new target benchmarks. These target benchmarks are defined based on and taking into account the draft matrix of indicators for monitoring and evaluating the implementation of the Plan and the Programme of the Government of the Kyrgyz Republic under the transition to sustainable development (2013-2017).

Indicator	2012	2013	2014	2015
Proportion of women of reproductive age using contraceptives (percent)	29.3	29.7	30.2	30.6
MMR per 100,000 live births	47.6	47.4	47.2	47
Proportion of pregnant women ill with anaemia, percent	65.6	65.8	64.8	62.5

CONCLUSIONS

The Millennium Development Goals, especially in the health sector, have been part of the strategic documents of the socio-economic development and sectoral plans at least from 2006 onwards. However, despite the ongoing reforms, the results of the reforms in maternity protection were lower than expected. The dynamics of maternal mortality have not yet become positive and the level of maternal mortality in Kyrgyzstan is one of the highest in the CIS countries. Perceiving the need to change existing negative trends, the government has decided to adopt the MAF to MDG-5. Within the structure, the report and the plan of action to accelerate achievement of MDG 5 is presented. This report was discussed and endorsed on 6 September 2013 at a meeting of the Coordinating Council for the Achievement of the MDGs by the Government of the Kyrgyz Republic.

This report is a situation analysis, which showed that the negative dynamics of maternal mortality are due to a combination of medical and non-medical factors, not least of which are socio-cultural and socio-economic factors. The report proposes a new Action Plan in three areas of strategic intervention.

1. Reproductive Health Care
2. Effective Perinatal Care
3. Emergency Obstetrics Care

The action plan under the framework of MAF is a timely document that aims to ensure that the relevant sections of the programme for the protection of mother and child health of *Den Sooluk* programme are fully implemented. This report stresses that effective support for maternal health should become an issue that affects all people, local authorities, NGOs, the government and development partners. The specificity of the proposed action plan brings together different institutions in order to increase support for vulnerable mothers. The main priority of the *Den Sooluk* programme emphasized in the Action Plan is to improve the quality of health services for pregnant women at all stages of the perinatal period, including the phase of planning for pregnancy, antenatal care and emergency obstetric care.

A key role in accelerating progress in the area of maternity protection is given to social protection, especially for highly vulnerable pregnant women. The Action Plan contains all required activities to strengthen the sustainability of the results through intersectoral cooperation. The government and development partners have committed themselves to implementing the Action Plan through existing and planned activities and programmes.

The financial gap that arises in the follow-up of assessing the financing needs of this plan is relatively small. It is assumed that the government, together with development partners, will be able to develop joint approaches to fill such a gap. Given the significant challenges in achieving the millennium target benchmarks on maternal health and the shortage of time remaining prior to 2015, the report proposes refraining from excessively ambitious target indicators. This Action Plan is more modest and its implementation should lead to the emergence and consolidation of the positive trends in the reduction of maternal mortality and the sustaining of such trends.

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GLOSSARY

Abnormal Interposition - a condition in which, at inception of labour, the end of fetal head is inserted into the entrance of pelvis in the unbent state or the pelvic end, arms, transverse position of fetus are presented in lesser pelvis.

Abortion - termination of pregnancy (spontaneous expulsion or extraction of fetal embryo or fetus) after 22 weeks of gestation or until the weight of fetus weight reaches 500 gr.

Abruptio Placentae - all cases of premature separation of placenta from their places of attachment occurring before the birth of the fetus - in gestation or childbirth.

Amniotic Fluid Embolism of Pulmonary Artery and its Branches - a complication in intensive labour, placenta previa, abruptio placentae of normally presented placenta and developing as a result of infiltration of amniotic fluid into the mother's blood stream.

Anomalies of Labour - the pathological changes of uterine contractions during labour. In the normal course of pregnancy closer to its end, there are prenatal uterine contractions that occur at night and result in shortening and softening of the cervix and cervical canals. The main types of abnormalities of labour include pathological preliminary period, primary and secondary uterine inertia, excessively strong labour activities, noncoordination of labour and uterus tetanus.

Artificial abortion - abortion in the first trimester (before 12 weeks of gestation) of pregnancy.

Birth Rate - a demographic term used to describe the ratio of the number of births over a specific period per 1,000 persons.

Cause of Death - diseases, pathological conditions, or injuries that initiated a train of morbid events leading directly or indirectly to death, or the circumstances of the accident or violence that produced a fatal injury and must be recorded in the medical certificate of the cause of death.

CEMD - the confidential enquiry of maternal death implemented at the national level within the framework of the WHO 'Beyond the Numbers' initiative, data are collected from health organizations anonymously (de-identified) using the questionnaires as the tool.

Clinical Protocol of Health Organization (hereinafter referred to as the clinical protocol) - a regulatory document that defines the requirements of a health organization's delivery of health care to a patient with a certain disease, with a specific syndrome or in certain clinical situations. The purpose of developing a clinical protocol is to create the regulatory framework for quality management system of health care in the health organization.

Confidential – 'trust-based', 'based on confidence'. In case of confidential examination or treatment, the doctor knows the name of the patient, which should not be disclosed to other individuals.

Discrimination Against Women - any distinction, exclusion or restriction made on the basis of sex that has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field.

Drug-induced Abortion - artificial termination of pregnancy using drugs (mifepristone and misoprostol).

Eclampsia - common seizures not associated with epilepsy or any other known pathology.

Extragenital Pathology - a large group of diverse diseases with varying significance, syndromes, conditions in pregnant women, aggregated only by the fact that they are not the gynecological and obstetric complications of gestation. Extragenital pathology is the unfavourable course of gestation, which reduces or restricts the scope for adaptation interventions, and all complications arising during gestation, childbirth and the post-partum period are aggravated.

Extreme Poverty - is measured as a percentage of the population, the level of consumer spending of which is below the food poverty line (i.e., the costs incurred to purchase products that provide 2,100 calories per person per day).

Fertility - determines the average number of births to women of a particular childbearing age. The fertility rate is a more accurate index of fertility than the crude birth rate and testifies to potential changes in the population structure of the country. The fertility rate of two children per woman is considered as the reproduction ratio. The fertility rate of more than two children per woman promotes the growth of population. The higher fertility rate indicates that parents may encounter problems with feeding and educating their children, and women can encounter difficulties with returning to work. The fertility rate of less than two children per woman indicates a reduction in the size of population and its aging.

Fortified Food Products - food products enriched (fortified) with micronutrients in the process of production.

Gender - culturally preconditioned set of characteristics that determine social behaviour of women and men as well as the relationship between them.

Gender-Based Approach - "the process of assessing the implications for women and men of any planned action including legislation, policies or programs in all areas and at all levels. It is a strategy for making women's, as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally. The ultimate goal is to achieve gender equality".

Gender Equality - equal social status of men and women in the society.

Gender Sensitivity - understanding and consideration of the socio-cultural factors underlying the gender discrimination based on sex.

Gender Stereotypes - distinct conventional notions in a particular society on due 'feminine' and 'masculine' behaviour, their missions, social roles and activities.

General Violence - men and women who are not part of the conventionally distinguished groups of vulnerable populations. This is a diverse group that includes people of different gender, age, education degree, ethnicity, economic status, religious belief, social status, place of residence, the specifics of behaviour and other characteristics. The adult population significantly impacts the spread of HIV/AIDS.

Gravidogram - monitoring the development of a fetus, determination of its condition, diagnosing conditions threatening to fetus for timely intervention during gestation and delivery to prevent antenatal fetal asphyxia and death.

Health Summit – top-level meeting, communication or negotiation of decision makers; from a practical point of view, it is a meeting of decision makers and representatives from the medical community, the civil and non-governmental sectors, and the donor community, where issues related to health sector reforms are addressed.

HIV - human immunodeficiency virus, classified as lentivirus in a subgroup of retrovirus. Most viruses, like bacteria, plants and animals, have genetic codes made of DNA, which uses RNA to build specific proteins. The genetic material of retroviruses is the RNA itself. HIV inserts its RNA into the DNA of the host cell, thereby preventing the normal functioning of host cells and transforming it into the factory for production of virus.

Hypertensive Complications - complications of gestation associated with high blood pressure.

Injecting Drug Users - men and women using drugs through injections regardless of the proven diagnosis and the stage of drug addiction, length and frequency of using drugs, their types and dosages.

Instrumental Curettage - invasive (surgical intervention) scraping of uterine wall with the help of instruments.

Iron Deficiency Anaemia (IDA) - a clinical and hematological syndrome or set of symptoms, the underlying effect of which is the impaired synthesis of hemoglobin due to iron deficiency, developing a variety of pathological (physiological) processes.

Join in Circuit - an interactive information tool aimed at providing young people with structured, adequate knowledge of reproductive sexual health, including HIV/AIDS.

Live Birth - the complete expulsion or extraction from its mother of a product of conception after which such separation the said product breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, regardless of whether the umbilical cord has been cut or the placenta is attached.

Magnesian Therapy - administration of magnesium sulfate in the dosages recommended for prevention of eclampsia (seizures).

Manual Vacuum Aspiration - the process by which the content of the uterine cavity is evacuated using negative pressure produced by a special syringe.

Maternal Mortality - the death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the site of duration of pregnancy from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Micronutrient Deficiency - a condition of the human body caused by insufficient intake of micronutrients from food leading to development of various diseases.

Micronutrient Supplementation - using micronutrients in preventive dosages in the form of pills among target groups of population.

Migrants - persons who settle or stay in a country where she or he was not born and has acquired some significant social ties to this country (although, according to some states' policies, a person can be considered as a migrant even when she/he is born in the country).

Mobile Population - individuals who move from one place to another temporarily, for the period of a season, or for permanent residency voluntarily or by virtue of circumstances. The main professional groups engaged in movements are truck drivers, transport companies staff, transient vendors and commercial sex workers.

NMCR - review of near-miss cases, the tool for internal audit of cases threatening to the life of a woman at health care facility level, implemented in pilot facilities as well as under the WHO 'Beyond the Numbers' initiative.

Perinatal Period - begins in early fetal development (22 weeks gestation or 500.0 grams of weight) and continues until the end of the seventh day after birth.

Placenta Praevia - an abnormal placenta position located in the lower segment of the uterus, with one part of the placenta being in the interorifice of the uterus, partially or completely covering it. Having the above position, the placenta is located below the fetal presenting part and the placenta is normally attached to the body of the uterus and its lower edge does not extend to the internal orifice of the uterus by 7-8 centimetres and more.

Polypragmasy (in medicine) - the simultaneous (often unjustified) administration of multiple drugs or curative procedures.

Pre-eclampsia - the development during gestation of hypertension and severe proteinuria (1989, WHO), manifested by high blood pressure, proteinuria (the appearance of protein in urine), edema and disorders of the nervous system (headache, blurred vision). In the absence of timely diagnosis and comprehensive treatment of pre-eclampsia it becomes eclampsia, immediately representing a real threat to the lives of the mother and fetus.

Sex Workers - persons (men and women) providing sexual services for financial gains.

Shoulder Dystocia - a complication of the second stage of labour, when, after the birth of the head, there is a delay of the anterior shoulder following the symphysis or impaction in the pelvis. The rear shoulder at that time either impacts in the hollow of the sacrum or is over the sacropromontory, resulting in the promotion of the fetus through the birth canal mother stops. The diagnosis of resulting in lack of movement of fetus along the pelvigenital canal of the mother. The diagnosis of shoulder dystocia is made if the birth of the shoulder does not occur within the first 60 seconds following the birth of the fetal head while using the normal obstetric tactics.

Still Birth (stillborn fetus) - the death prior to the complete expulsion or extraction from its mother of a product of human conception irrespective of the duration of pregnancy; the death is indicated by the absence of breathing or other symptoms or signs of life, such as heart beating, pulsation of the umbilical cord, or definite movement of voluntary muscles.

STIs - sexually transmitted infections, sexually transmittable venereal diseases caused by infections transmitted through sexual contact, e.g., gonorrhea, syphilis, chlamydia.

Thromboembolism of Pulmonary Artery (TPA) - the occlusion (blockage) of the trunk or main branches of the pulmonary artery by thrombus particles formed in the veins of the systemic circulation or the right heart chambers and brought in the pulmonary artery with blood.

Tolerance - a patient, non-judgmental attitude (e.g., towards a different lifestyle).

Transfusion - administration of a certain liquid, for instance, blood, plasma or saline solution into the vein of the patient through transfusion.

Uterus Rupture - one of the most severe damages to the birth canal, the development of which even in case of timely recognition and health care does not always secure the survival of fetus and patient. The complication is accompanied by heavy haemorrhage and severe shock (traumatic and hemorrhagic).

Venous Disease - varicose veins and swelling of the feet manifested by evident tenderness, feeling of heaviness, night cramps, numbness and tingling of extremities, high blood coagulation and the appearance of blood clots.

Violence Against Women - any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life (Declaration on Elimination of Violence against Women).

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ANNEX 1. MATRIX OF ONGOING INTERVENTIONS IN THE KYRGYZ REPUBLIC AND AIMED TO ACHIEVING MDG 5

Legal Regulations and List of Interventions in line with Legal Regulations	Content of Interventions
Reproductive Health Care of Population of the Kyrgyz Republic	
- The National Reproductive Health Care Strategy of Kyrgyz Republic (approved by the Edict of the President of the Kyrgyz Republic, Ref. No. 387 as of July 15, 2006 'On National RH Care Strategy of the Kyrgyz Republic until 2015'). - Government Decree, Ref. No. 185 as of April 20, 2008 'On Implementation of the Law the Kyrgyz Republic 'On Reproductive Rights and Safeguards of their Implementation'. - Edict of President of the Kyrgyz Republic, Ref. No. 387 as of July 15, 2006 'On National Reproductive Health Care Strategy of the Kyrgyz Republic until 2015'. **4 priority areas affecting the MMR:** **1. The Government Policy on Reproductive Health Care of Population of the Kyrgyz Republic.** **2. Safe Motherhood** **3. Reproductive Choice** **The implementation timeline is 2006-2010** **4. Reproductive health of adolescents** ***Implementation timeline: 2010-2015***	The RH Intersectoral Coordination Council (ICC) was established under the Government of the Kyrgyz Republic; however, there were no meetings of ICC due to quick changes in the government. The local ICCs on RH under LSGs were established in each oblast and rayon, the members of which included LSG, mass media, NGO, clergy, departments of justice, education, physical culture, obstetric facilities, oblast FMC, OHRHCC. The law on reproductive rights was amended. ***Safe Motherhood and Reproductive Choice*** The interventions in this area have been implemented within the Perinatal Care Improvement Programme of the Kyrgyz Republic from 2008 to 2017, mainly at the expense of parallel financing. ***Reproductive Health of Adolescents*** The range of health services in the area of reproductive health of youth, particularly the diagnosis, treatment and prevention of diseases, the promotion of health lifestyle and safe sexual behaviour, as well as the establishment of a system of redirecting/referring young people to sub- specialists. The YFS standards were tailored to Kyrgyzstan (but not approved). Three clinics providing YFS were opened (HRC in Jalalabad, the Student's Polyclinic in Bishkek city, YFS under RHA).
The Contraceptives Supply Trust Fund	- The supplies of intrauterine Copper T 380A devices, oral contraceptives, female and male condoms for vulnerable social groups with a coverage of 38% to 47% of female population worth of more than US$1 million during the second Country Programme at the expense of UNFPA headquarters. - To ensure equal access to CA, the expert group (MHIF, ML&SP, MJ) has developed criteria to identify vulnerable and low-income groups of population for targeted interventions in terms of supply of necessary resources for reproductive health care. The mechanism of using social passports for targeted distribution of CA was developed and piloted in Batken oblast.
The CA Logistics Management Information System (CA LMIS)	- The team of experts consisting of specialists from RMIC, KNHRC and DPD&ME regularly monitor the use of contraceptives at the level of PHC, including the evaluation of the quality of using the recording and reporting forms, compliance with storing requirements, compliance with prescription and other clinical requirements. - The staff PHC facilities is being trained on CA logistics.

	Responsible Bodies	Overall Intervention Assessment: outcomes (coverage, cost efficiency, timelines)
	GO KR, MH KR, LSG and LSA, HO, PHC, maternity units/hospitals UNFPA, PA RHA and other international and national organizations	Insufficient commitment and lack of earmarked financing lead to implementation of interventions limited only to the health sector The programmes of safe motherhood and RH of adolescents are implemented due to parallel financing and in small part due to public budget funds (SGBP), SWAp (equipment and logistical support)
	MH KR, MHIF, ML&SP, HF, PHC, UNFPA	in the pipeline
	MH KR, RMIC, HO PHC, UNFPA	

Legal Regulations and List of Interventions in line with Legal Regulations	Content of Interventions
The 'Country Commodity Manager' (CCM) software – management of commodities supplied to pharmaceutical storing facilities	The 'Country Commodity Manager' software was installed, which allows continuous access to updated information on availability of contraceptives in the country as well as project, the identification of the remaining balance and shortages, and justified requests for subsequent supplies.
Social mobilization of the population	Carrying out interventions on raising awareness about sexual and reproductive health/HIV/AIDS/STIs, including roundtables, workshops on social mobilization; development of plans on joint actions through the Health Promotion Units to Village Health Committees; workshops on interpersonal communication for population, including youth. - Methodological manuals and practical guidelines on social community mobilization on SRH ('Step by step', 'How to deal with community on SRH') for religious and community leaders were developed. - The training workshops on promotion of family planning and RHC were conducted for Muslim religious leaders.
The Project 'Reproductive Health Services'	Goal: build capacity of the national health system in terms of providing proper quality services and information about reproductive health through improved national policy, conducting training programmes on sexual and reproductive health with the focus on safe motherhood.
The Project 'Supplies of Reproductive Health Care Items'	Goal: improve access to voluntary services on family planning through enhancing the national contraceptive logistics and management information system (CLMIS), improve knowledge and practical skills of RH/FP service providers and raise awareness of the public about family planning issues.
The Project 'Information/Services on Prevention of HIV/AIDS and STIs	Goal: disseminate essential information, train youth, improve the efficiency of services for youth, build capacity of teachers in VET system regarding SRHR and dealing with youth, train young people, activists and leaders of youth organizations across all regions of the country in systemic training of the Y-PEER youth network, facilitate the introduction of voluntary confidential counselling and treatment in the health care system, build capacity of non-governmental organizations and employees of the Ministry of Health regarding issues of promotion and introduction of youth-friendly services.
Introduction or integrated services in PMTCT during antenatal care, with focus on vulnerable groups women (IDUs, focus on STI, HIV)	Goal: improve access to quality services for the RSH, antenatal strategies and PMTCT for women from vulnerable groups (IDUs and PLHIV)
The UN Delivery as one/DaO Integrated Concept, 'Access of fertile-age women and newborns to high-quality health services' (UNICEF)	The project pays particular attention to the wide range of strategies on health care of newborns and their mothers. They include access to clean water; clean conditions for deliveries; screening to detect high risk pregnant women, monitoring of possible complications in all women; ensuring access to emergency obstetric care; having available guidelines for treatment of emergency obstetric pathology, etc.

	Responsible Bodies	Overall Intervention Assessment: outcomes (coverage, cost efficiency, timelines)
	MH KR, DPD&ME, UNFPA	It is installed at the central storing facility of the Department for Provision of Drugs and Medical Equipment (DPD&ME)
	MH KR	
	MH KR, HF (Merged Oblast Hospital (MOB), TH with maternity units, Talas oblast, Chui oblast - Panfilov, Moskovskyi, Jayilskyi rayons; Suzak rayon, Jalalabad city), UNFPA	
	MH KR, GF, UNICEF	Pilot project implementation
	MH KR, NMCHC, obstetrics units in Osh and Batken oblasts, UNICEF	

Legal Regulations and List of Interventions in line with Legal Regulations	Content of Interventions
Effective perinatal Care	
- The Programme on Improving Effective Perinatal Care in the Kyrgyz Republic from 2008 to 2017 (approved by the Order of the Ministry of Health of the Kyrgyz Republic Ref. No. 315 as of June 20, 2008) - Action Plans for implementation of the Programme	The Programme is aimed at fulfilling the commitments for achieving MDGs on health care. The Programme, combined with international information sources, serves as the foundation for implementation of regionalization and development of a 'Range of perinatal care services', arranging a stepwise system of perinatal/neonatal care with development of core regulations on delivery of antenatal, perinatal and neonatal care based on effective technologies and evidence-based medicine principles.
The range of perinatal care services (approved by the Order of the Ministry of Health of the Kyrgyz Republic Ref. No.647 as of 28 November 2012)	Development of standard range of obstetrics and neonatal services
The Order of the Ministry of Health of the Kyrgyz Republic 'On operation of birth preparation schools' (Ref. No. 117 as of 9 March 2012)	The schools are established under PHC HFs with the aim of preparing pregnant women and members of her family for deliveries
- Effective Perinatal Care (within the WHO 'Safe Pregnancy' initiative)	Goal: ensure skilled care in each delivery to comply with continuity of care. Global strategies and health sector are pivotal. Technical assistance and development of national capacity. Make sure that each delivery is attended by skilled health personnel.
Effective Antenatal Care (under the WHO Initiative 'Safe pregnancy')	Goal: Ensure high quality antenatal services delivered in each pregnancy and compliance with care continuity, technical support and building up the national capacity. The involvement of women and families in decision- making process related to the state of health of a pregnant woman.
'Maternal and Child Care' Project - III	Goal: Improve health care system in northern rayons of the country, reduce maternal and child mortality. Over the implementation period, 25 HFs in Chui, Talas, Naryn, Issyk-Kul oblasts, and Bishkek city were equipped.
Maternal and Child Health, Nutrition/ Micronutrient Subproject	Goals: - Ensure sustainable universal iodization of salt; - Reduce by 1/3 the deficit in vitamin A in children under 5 and puerperant women; - Reduce by 1/3 the anaemia rate in children under 3 and women of reproductive age
Baby-Friendly Hospital Initiative	The HOs are restructured under this programme through the introduction of modern perinatal technologies aimed t facilitating a concerned attitude to pregnancy, deliveries and breastfeeding.

	Responsible Bodies	Overall Intervention Assessment: outcomes (coverage, cost efficiency, timelines)
	MH KR, maternity units/hospitals, PHC HF, donor agencies	Implemented in pilot facilities
	MH KR, maternity units/hospitals, PHC HF	In the pipeline, Development partners assistance is required
	MH KR, UNFPA, USAID, GIZ, Public Association 'Reproductive Health Alliance" (PA RHA) and other international and national organizations	The coverage is insufficient. It is implemented due to parallel financing
	MH KR, maternity units/hospitals, PHC HO, donors agencies	The implementation began in 2000 and is continuing now. Coverage extends to more than 70 percent of maternity units. Introduced due to parallel financing. The training modules are introduced in the curricula of educational institutions.
	MH KR, PHC HO, donors agencies	The training modules are introduced in the curricula of educational institutions, whereas the coverage is not full. Introduced due to parallel financing.
	MH KR, obstetrics HO, KfW	Project implementation timeframes: 2004-2007
	MH KR, RMIC, PHC HO, maternity units, UNICEF	
	MH KR, maternity units, hospitals, PHC HO, donors agencies	Implemented since 2000. Coverage extending to 47 percent of maternity hospitals is not sufficient.

Legal Regulations and List of Interventions in line with Legal Regulations	Content of Interventions
Effective perinatal Care	
The Order of the Ministry of Health of the Kyrgyz Republic 'On Implementation of the KR Government Decree On Implementation of the Law of the Kyrgyz Republic On Protection of Breastfeeding and Regulating the Marketing of Products and Items for Artificial Feeding of Children' (Ref. No.16 as of 14 January 2010.)	The Action Plan of the Ministry of Health of the Kyrgyz Republic on protection of breastfeeding and regulating marketing of products and items for artificial feeding of children is approved by the Order.
The Order of the Ministry of Health of the Kyrgyz Republic 'On Organization of Protection, Support and Promotion of Infant Breastfeeding in Young Children at Maternity Hospitals,(Departments), Child Care Facilities, GPCC, Family Medicine Centres/Family Group Practitioners /FAPs of the Kyrgyz Republic' Ref. No. 68 as of 11 February 2010)	Main goal – support and promote breastfeeding based on 11 principles of successful breastfeeding; instructions on introduction of 11 principles of breastfeeding and the algorithm of 'Baby-Friendly Clinics/Facilities'
Emergency Obstetric Care	
The Government of the Kyrgyz Republic Decree 'On Approval of Instruction on Infection Control in Health Organizations of the Kyrgyz Republic' (Ref. No.32 as of 12 January 2012)	Upgrading and streamlining of performance of health organizations providing health services to population irrespective of the type, kind and level and irrespective of the organizational and legal form of prevention of nosocomial (hospital-acquired) infections and safety of medical procedures
- The Order of the Ministry of Health of the Kyrgyz Republic 'On Approval of Clinical Protocols on Obstetrics and Gynecology' (Ref. No. 466 as of 23 September 2011) - The clinical protocols on obstetrics and gynecology Collection #3, adopted by the Expert Council on Evaluation of Quality of Clinical Guidelines/Protocols of the Ministry of Health of the Kyrgyz Republic and approved by the Order of the Ministry of Health of the Kyrgyz Republic (Ref. No. 539 as of 21 October 2008 and Ref. No. 625 as of 3 December 2008). - Clinical protocol on obstetrics-gynecology: drug-induced abortion in first and second trimesters of gestation	Goal: Promotion of high-quality obstetric services and mainstreaming of access to them. Target groups: personnel involved in provision of obstetric services. The collection includes 21 clinical protocols in obstetrics and gynecology for primary, secondary and tertiary levels of care.
The Order of the Ministry of Health of the Kyrgyz Republic 'On Organization of Operation of Maternity Hospitals/Departments and Further Improvement of Obstetric-Gynecological and Neonatal Care in the Kyrgyz Republic' (Ref. No. 92 as of 5 March 2009).	Goal: improve the organization and quality of provided services in maternity units (hospitals) and improve obstetric service and neonatal care. The instruction on organization of work in maternity hospital/unit; on organization of rooms for neonatal vaccination; on arranging canteens for preparing artificial formulas for newborns based on medical indications; on prevention of nosocomial infections and infection control in obstetric hospitals, etc.
Primary Neonatal Resuscitation	Conduct training for health workers of obstetric organizations to make sure that each delivery is attended by skilled health personnel trained in primary neonatal resuscitation.

	Responsible Bodies	Overall Intervention Assessment: outcomes (coverage, cost efficiency, timelines)
	MH KR, maternity units/hospitals, PHC HO	
	MH KR, maternity units/hospitals, PHC HO	
	MH KR, NMCHC, HF (TH with maternity units, maternity hospitals at all levels of obstetric care delivery, perinatal centres), PHC HO	
	MH KR, maternity hospitals/units, donor agencies	
	MH KR, maternity hospitals/units, donor agencies	The training modules are introduced in the curricular of educational organizations. Implemented due to parallel financing

Legal Regulations and List of Interventions in line with Legal Regulations	Content of Interventions
Monitoring of Maternal Mortality	
- The Order of the Ministry of Health of the Kyrgyz Republic 'On Nationwide Introduction of Confidential Enquiry of Mother's Death and Review of Near-Miss Cases at Health Organizations' (Ref. No. 291 as of 11 June 08.) - The Order of the Ministry of Health of the Kyrgyz Republic 'On Nationwide Introduction of Confidential Enquiry into Mother's Deaths' (Ref. No. 567 as of 30 July 2009)	The Action Plan on implementation of recommendations of the National Workshop 'Beyond the Numbers', Action Plan on introduction of confidential enquiry of mother's death and the members of the working group on introduction of confidential enquiry of mother's death and near-miss cases review
The Order of the Ministry of Health of the Kyrgyz Republic 'On Transition to Definition of Maternal Mortality in accordance with ICD-10, revise and make changes in the National Commission on Prevention and Reduction of Maternal and Perinatal Mortality' (Ref. No. 292 as of 11 June 2008)	Goal: conduct a qualitative assessment of deaths of pregnant women (due to abortions, ectopic pregnancy, obstetrical and extragenital pathology during the entire gestation period) parturients and puerperants. The membership of the National Commission on Prevention and Reduction of Maternal and Perinatal Mortality is approved, the moratorium on administrative punishments for submission of full and true data on maternal mortality to HFs of the country is introduced.
- The Order of the Ministry of Health of the Kyrgyz Republic 'On introduction of live birth criteria' recommended by WHO Ref. No. 562 as of 19 December 2004) - The instruction on the introduction and transition to new criteria of live births recommended by WHO and effective as of 1 June 2004, the nationwide registration of cases of births and deaths in KR at the ZAGS offices of vital records - The Order of the Ministry of Health of the Kyrgyz Republic 'On approval of forms for medical recording and quarterly statistical reporting in connection with usage WHO criteria on live birth' (Ref. No. 45 as of 19 February 2004)	The introduction of recording and reporting forms for born and deceased children in health organizations. Ensure collection and analyses of data from health facilities. Approve forms for medical recording and quarterly statistical reporting in connection with transition to WHO criteria on live births.

	Responsible Bodies	Overall Intervention Assessment: outcomes (coverage, cost efficiency, timelines)
	MH KR, NMCHC, HF with maternity units, maternity hospitals delivering obstetric care at all levels, perinatal centres, donors agencies	
	MH KR, NMCHC, HF with maternity department/ hospitals at all levels of obstetric care, perinatal centres	
	MH KR, NMCHC, HF (MOH, TH having maternity department, hospitals of all levels of obstetric care, perinatal centres)	The instruction of mandatory implementation in each HF providing obstetric services

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