EVALUATION OF UNICEF PROGRAMME ON PERINATAL CARE FOR THE PERIOD 2010 – 2013 PROJECT EVALUATION REPORT
This report is the product of a summative evaluation of the programme on perinatal care, implemented between 2010-2013 within the framework of Delivering as One Project Ensuring Access to Affordable Health Services for Women of Reproductive Age and Newborns in the Affected Areas of the Kyrgyz Republic. The external evaluation has been commissioned by UNICEF Kyrgyzstan Country Office and was a joint and participatory process involving key stakeholders working within the MCH sector.

The findings and recommendations of the evaluation will support stakeholders including policy makers and development partners to support further progress in enhancing maternal and newborn survival and thus contribute to the A Promise Renewed Initiative, pledged by the Government of the Kyrgyz Republic in 2012.

The evaluation report has been prepared by international consultants Mrs. Tamar Gotsadze, MD, PHD and Mrs. Chiara Zanetti, MD, MPH.

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AKNOWLEDGMENT

This report is the product of a summative evaluation of the Dao Project Ensuring Access to Affordable Health Services for Women of Reproductive Age and Newborns in the Affected Areas of the Kyrgyzstan Republic. The external evaluation has been commissioned by UNICEF Kyrgyzstan Country Office and was a joint and participatory process involving key stakeholders working within the MCH sector. Three experts from MOH joined the team of external evaluators. Sincere thanks to Mrs. Batma Dolbaeva, Docent in Obstetrics-Gynecology at Kyrgyz-Russian Slavic University and Mrs. Janar Botbaeva, Assistant at the Pediatrics Department at Kyrgyz Medical University for Post-Graduate Studies. The evaluation was carried in December 2013 - January 2014.

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Chiara Zanetti, MD., MPH
ABBRIVIATIONS

ALOS  Average Length of Stay
ANC   Antenatal Care
ARV   Antiretroviral Treatment
CBA   Criterion Based Audit
CPAP  Continuous Positive Airway Pressure machine
CPC   Country Programme Cooperation
DAC   Development Assistance Committee
DaO   Delivering as One
EBMD  Evidence Based Medicine Department
EmOC  Emergency Obstetric Care
EMTCS Emergency Transportation and Consultation System
ENC   Effective Neonatal Care
ENM   Early Neonatal Mortality
EPC   Effective Perinatal Care
ET    Evaluation Team
FAP   Feldsher-Midwifery Post
FDG   Focused Group Discussion
FGP   Family Group Practitioners
FMC   Family Medicine Centre
GoK   Government of Kyrgyzstan
GPC   Group Practice Centers
HBB   Help Babies Breath
HIV/AIDS Human Immunodeficiency Virus Infection/Acquired Immunodeficiency Syndrome
ICU   Intensive Care Unit
IT    Information Technology
KAON  Kyrgyz Association of Obstetricians, Gynecologists and Neonatologists
KSCMTI Kyrgyz State Continuous Medical Training Institute
M&E   Monitoring and Evaluation
MCH   Mother and Child Health
MDG   Millennium Development Goal
MHIF  Medical Health Insurance Fund
MICS  Multiple Indicator Cluster Survey
MMR   Maternal Mortality Rate
MOH   Ministry of Health
MTR   Mid Term Review
NGO   Non-Governmental Organization
NMR   Neonatal Mortality
NPCP  National Perinatal Care Programme
NR    Neonatal Resuscitation
Ob/Gyn Obstetrician and Gynecologist
OECD  Organization for Economic Cooperation and Development
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<td>Perinatal Care</td>
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<td>PHC</td>
<td>Primary Health Care</td>
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<td>PMTCT</td>
<td>Prevention of HIV transmission from Mother to Child</td>
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<td>QoC</td>
<td>Quality of Care</td>
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<td>SDA</td>
<td>Swiss Development Agency</td>
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<td>Semi Structured Interviews</td>
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<td>SWAP</td>
<td>Sector Wide Approach</td>
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<td>TOT</td>
<td>Training of Trainers</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<tr>
<td>USAID</td>
<td>US Agency for International Development</td>
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<tr>
<td>VCT</td>
<td>Voluntary Counseling and Testing</td>
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<td>VHC</td>
<td>Village Health Council</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>ZO</td>
<td>Zonal Office</td>
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EXECUTIVE SUMMARY

COUNTRY CONTEXT

Kyrgyzstan is a former Soviet country in mountainous Central Asian region. The country has a population of over five million, of which ethnic Kyrgyz make up the majority (71%); while Uzbeks (14%) and Russians (8%) are the largest minorities. The population is heavily concentrated in rural areas of the country, and only one-third of the people are living in cities. In terms of vulnerability, children from rural and remote areas are more prone to poverty, ill health, and abandonment. Nearly half of the children in Kyrgyzstan live in poverty.1 In 2010, the Southern part of the country was affected by civic unrest that resulted in displacement of over 300,000 people.

Since 2012, Kyrgyzstan is on-track to achieve Millennium Development Goal (MDG) 4 on Reducing Child Mortality as infant and under-five mortality rates have steadily decreased. According to 2012 data, under-five mortality rate is at 27 and infant mortality at 24 per 1,000 live births. Neonatal deaths comprise 52% of all under-5 deaths at the rate of 14 per 1,000 live births.2 Though 97% of pregnant women receive antenatal care and give birth under attendance of skilled health care professional, high maternal mortality rates (MMR) have been observed in Kyrgyzstan for many years.

In 2010, MMR was at 49.7 per 100,000 live births indicating that reaching the target of MDG 5 seems very unlikely.3 Therefore, the country has focused on maternal mortality as part of the MDG Acceleration Framework. In addition, looking beyond the MDGs and 2015, the Government of the Kyrgyz Republic has pledged A Promise Renewed initiative, a global movement to accelerate efforts to improve maternal, newborn and child survival, and has committed to work towards a new target - decreasing under five mortality rate to 20 or fewer deaths per 1,000 live births by 2035.

The maternal and newborn health care system in the country is developed with adequate services in terms of the quantity. However, the quality of care is a serious concern. Analysis of mortality cases in the country show that the majority of neonatal deaths occur in the first seven days of infants’ life, and of these the largest share during the first 24 hours after childbirth meaning that the majority of neonatal death takes place under supervision of the health professionals.4 In addition, high MMR ratio with high institutional delivery rate indicates lack of quality in perinatal care.

The health care system is severely constrained by antiquated infrastructure and lack of funds for development. The majority of hospitals are old and most do not have central heating, running water or sewage systems. There are shortage of drugs, medical equipment and skilled health care personnel. Staffing crisis due to migration and low pay hinders the development further.5 Particularly emergency medical services and infectious control are underdeveloped.6

Despite growing poverty rates in recent years, Kyrgyzstan has made progress in the health sector. In 2012, National Health Care Programme Den Sooluk was developed following the previous programmes Manas (1996-2005) and Manas Taalimi (2006-2010). The programme is being implemented using a Sector-wide Approach (SWAP) mechanism that ensures programme integration and leverage funding in the health sector. As the lead agency in the Mother and Child Health (MCH) cluster in the SWAP, UNICEF has successfully been advocating for comprehensive approach to perinatal care. In 2008, the National Perinatal Care Improvement Programme of the Kyrgyz Republic for 2008-2017 was developed in accordance with Manas Taalimi and the National Reproductive Health Strategy by 2015 with the goal to reduce maternal, perinatal/neonatal and infant mortality in the country in line with MDG targets and improve the quality of care by introducing a multilevel structure of referral in perinatal care.

PROJECT DESCRIPTION

During 2009-2013 three major UNICEF projects have contributed to improvement of perinatal care. In 2009-2010 UNICEF implemented a project Reforming Perinatal Care System in Kyrgyzstan that aimed to reduce perinatal mortality by creating an enabling environment for the implementation of National Perinatal Care Improvement Programme for 2008-2017 mentioned above, enhancing expertise on perinatal

1 Situation Assessment of Children in the Kyrgyz Republic, UNICEF, 2011
6 Assessment of Quality of Maternal and Neonatal Services at Hospital and Primary Health Care Levels, UNICEF and UNFPA, 2012.
7 Rapid Assessment in FGP’s and FAP’s with Maternity Beds in Target Oblasts, MoH, UNICEF, 2013.
care on the national level, supporting establishment of Baby Friendly Hospitals as well as by improving monitoring through national newborn register. Building on these activities, a project on “Ensuring Access to Affordable Health Services in the Affected Areas of the Country for Women of Reproductive Age and Newborns” was initiated by UNICEF during 2010-2013. The project was part of Kyrgyzstan’s One UN Programme funded through the Expanded Delivering as One (DaO) funding window and implemented jointly with UNFPA and in some extend with WHO (only in the first project year, 2010), in Batken and Osh provinces.

In addition to projects described above, in the period of 2010-2011, the “Post emergency and early recovery project” funds were use that supported the pilot sites with emergency obstetrics kits and newborn resuscitation equipment, better access to water (clean and hot water) and improvement of sanitary conditions in pilot maternity facilities through rehabilitation of the sewage system. After the civic conflict in June 2010, the “Equity projects” (2012-2015) were initiated in Osh, Batken and Jalal-Abad provinces. As the previous UNICEF projects have enhanced perinatal care on the secondary hospital level, the ongoing Equity project operates mainly on the primary health care level.

**Overall objective** of the project is to reduce perinatal mortality in the Kyrgyz Republic. **Specific objectives** are to enhance equitable access to health care services of the poor and vulnerable groups by improving the quality of maternal and newborn care and monitoring data in selected maternity hospitals.

**Project Expected results** are: i) Continuous Quality Improvement process demonstrated, institutionalized in maternity hospitals; ii) Enhanced capacity of medical experts on the national level; iii) Improved quality of antenatal and perinatal care through critical lifesaving equipment, infrastructure; iv) Improved practical skills of medical workers for antenatal and neonatal care in target primary health care clinics and 20 selected maternity hospitals (introduction of Making Pregnancy Safer, Effective Perinatal Care, neonatal resuscitation, Baby Friendly Hospital Initiative); v) Effective registration and monitoring system in place including analysis of critical cases (i.e. pregnancy registration, Newborn Register, The Near Miss Cases Review); vi) Adequate referral and remote consultation system in place; and vii) Improved accessibility and utilization of maternal and newborn services especially in rural and remote areas through increased level of awareness among the population.

**Main Project partners** are MoH including Mother and Child Health Department, National Center of Mother and Child Health, National Health Promotion Center, Kyrgyz Medical Academy, Postgraduate University, UNFPA, WHO, GIZ, University Murcia in Spain, Kyrgyz Association of Obstetricians, Gynecologists and Neonatologists (KAON), Kyrgyz Association of Perinatologists, Kyrgyz Midwives Association, Hospital Association of Kyrgyzstan.

**PURPOSE, OBJECTIVES, METHOD AND SCOPE OF EVALUATION**

The UNICEF commissioned the summative evaluation of DaO project as UNICEF Country Programme (2012-2016) is reaching the midpoint. The main **purpose of the evaluation** was to document and increase the knowledge of results, good practices and lessons learnt in perinatal care with specific recommendations. It also specifies UNICEF’s contribution to enhancing maternal and child health care system, quality of care and maternal and child survival in the country as well as determines whether UNICEF pilot projects have been effective and should be scaled up countrywide. In addition to UNICEF Country Office, other UN Agencies and development partners as well as the Ministry of Health will benefit from the evaluation in planning, implementing and coordinating perinatal care.

The evaluation focused on assessing the project’s current and potential contribution to the improvement of MCH health indicators in Kyrgyzstan. Each evaluation criterion was analyzed from the perspective of assessing the implications of project activities’ on: i) **final beneficiaries** - women and children; ii) **service providers** - health care professionals whose capacity has been built (including doctors, midwives, and health facility managers); iii) **sub-national decision-making level** - Regional health authorities and (local governments; and iv) **national decision-making level** - national health authorities and key stakeholders (Ministry of Health and Department heads, Education institutions, Health Statistics Department, International Development and Implementing Partners, etc.).

The evaluation examined the relevance, effectiveness, efficiency and sustainability of the UNICEF’s contribution for which the OECD DAC Evaluation Framework (EF) was developed which structures the issues and questions as indicators that enabled to measure or assess them during the evaluation. Furthermore the EF also identifies the sources of information and the methods the evaluation team applied, the range of documents reviewed and key informants interviewed for each question.

The evaluation methodology comprised a mix of site visits and observations, face-to-face semi-structured interviews, focus group discussions, criterion-based.

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8 The DAC Principles for the Evaluation of Development Assistance, OECD (1991)
audit of medical records, desk-based research and review of existing reports, documents and available secondary data and considered ethical issues. The six major sources of data were used during the Evaluation: **people** - Individuals were consulted through individual (semi-structured) interviews and focus groups; **Site visits**: Data collected during the visits to sampled project supported sites; **Documents**: All project and thematic area related documents (primary and secondary data sources) were reviewed; **Observations**: Qualitative data collected during observation of service delivery at the visited facilities were carried out; **Criterion based audit**: data was collected through clinical audit of the patient medical cards. **Quantitative analysis**: The ET utilized quantitative analysis to examine changes in selected but comparable indicators from available data (quantitative facility statistics, monitoring data, researches and studies, etc.).

For key informants interviews the topic guides were developed based on the Evaluation Framework to help ensure systematic coverage of questions and issues. The Focus Group Discussions (FGDs) were carried out for a) physicians, b) midwives and nurses, and d) beneficiaries in all facilities visited. In total the team carried out 15 FDG in two Project target areas (Osh and Batken). For each FDG the guides were designed.

The evaluation was a joint and participatory process involving the team of three MoH experts, accompanied the evaluation team during the field visits. For the validation of the preliminary findings and recommendations the team met key MOH and UNICEF staff. All stakeholders agreed on the main findings of the evaluation as well as noted provided recommendations for further consideration. The evaluation team incorporated stakeholder’s comments for final formulation of the evaluation findings and recommendations. Specifically, relevant stakeholders were given the opportunity to comment on the draft evaluation report and the final evaluation report reflects these comments and acknowledged any substantive disagreements.

### EVALUATION FINDINGS

#### RELEVANCE

The Relevance of UNICEF project to national priorities was evaluated based on following two criteria: i) Relevance of project-specific objectives to the priorities declared in the national policy documents; and ii) Relevance of project-specific objectives to the priority health problems of the population as evidenced by the available epidemiological data. Based on the analysis it is obvious that the relevance of the project is high through clear alignment with national reform and national perinatal care policies and strategies as well as with the UNICEF country cooperation programme and has a great potential for improving health of mothers, children and vulnerable groups with particular focus on decreasing high levels of maternal and child mortality.

The current UNICEF’s assistance through two main projects under consideration (DaO and Equity projects), contributes to the achievement of objectives of National Perinatal Care Project and aims to strengthen the capacity of maternity hospitals with the weakest capacity of medical workers, infrastructure, compliance to standards and with the highest rate of delivery. Apart from these two sources of funding an Emergency and Early Recovery Project Funds were used (due to the late release of DaO funds in 2011) in support of DaO planed activities. More specifically UNICEF’s part of DaO project supports three out of five key objective set by the government in the National Perinatal Care Programme for 2008-2017. The project approach proved relevant in practice, though the rationale and workings of it were not made sufficiently explicit in the project document. The project was not built around an explicit and shared theory of change on the whole.

#### EFFICIENCY

In terms of efficiency the governance and management mechanisms set up proved to work well. So did the coordination system. Efficiency was ensured by adequate resource allocation, selection of most efficient funding modalities, especially for training and monitoring and supervision components, timely implementation of the planned activities and budget adjustments for meeting additional training, equipment and monitoring needs.

While the trainings supported by the project proved to be efficient and contributed to improved service quality, efficiency is largely undermined by the lack of enabling environment (availability of equipment, medicines, heating and running water, etc.) in some facilities to practice new skills and deploy new knowledge in the daily work and high turnover of trained staff due to the migration and retirement. The main limitation in efficiency concerns the focus on activities and their immediate outputs in project planning and monitoring.

Training funding modality proved to efficient. In the first years of project implementation UNICEF contracted Kyrgyz Association of Obstetricians, Gynecologists and Neonatologists (KAOD) for the organization and delivery of trainings to the medical personnel in project-targeted oblasts. While the given approach was beneficial for the empowerment of the professional association, the project staff observed the lack of ownership on part of the health facility manage-
ment. Thus starting from 2013, the organization and funding modality of training has been changed. The latter resulted in decrease of training costs per person per day by 54% as well as raising ownership and interest of hospital management in training of medical personnel and provision of support for effective implementation of evidence based approaches.

**Efficiency of investments in infrastructure and medical equipment is acknowledged.** 19% of funds were devoted for provision of critical life saving medical equipment and improvement of infrastructure. While the needs observed in targeted health facilities are rather more than UNICEF’s allocation of funds, but investments in equipment and infrastructure administered under the project proved its efficiency. In 2010 UNICEF conducted inventory of all non-functional medical equipment in DAO pilot maternities and based on the results, procured missing spare parts, installed them and conducting short training for med. personnel. This approach was acknowledged by MoH and other Development Partners as a best practice and applied in their respective sites. Investment decisions were based on careful assessment of needs in selected facilities. The priority was given to funding investments that maximized the impact on improvement of services for mother and children. Specifically, CPAPs donated by UNICEF helped the facility to increase premature and sick newborn survival in Intensive Care Unit (ICU) by 64%; Funding of oxygen stations improved oxygen supply to the main maternity departments, thus ensuring continuous oxygen supply for women and children in need and contributed to the increase of survival rates; Investments in water supply systems ensured improvement of infection control in health facilities; Investments in fences and doors of the patient rooms contributed to the energy efficiency and maintenance of adequate temperature regime, vitally important for newborn survival and good health.

**Investments in regular monitoring and supervision resulted in better service quality.** 12% of the UNICEF’s share of the project budget was allocated to extensive monitoring and supervision purposes. With the regular monitoring the project managed to timely identify problems and their causes and suggested to health facilities possible solutions to problems as well as provide technical support and/or investments in infrastructure and equipment. To maximize the monitoring efforts by avoiding potential conflict of interest and considerable amount of organizational time and human resources, UNICEF engaged national and local experts and promoted involvement of the key specialists from different maternities in monitoring of health facilities. While regular monitoring visits were a powerful tool to trace the changes in the quality of service delivery and recommendation discussed with the facility administration, it’s efficiency could have been maximized by building facility based capacity in self-monitoring, using same monitoring tools and tracking progress against set targets. The monitoring reports reviewed by the ET lacked a comparison of changes between recent and current monitoring visits as well as recommendations provided were not tied to measurable indicators and timelines.

Apart from monitoring, the project promoted periodic supervision missions to the target health facilities, which implied experts’ visits to the health facilities for 10-14 days and provision of on-job training to the health personnel. As in case of monitoring, efficiency of supervision activities could have been maximized if the measurable and time-bound indicators of change were set and measured before and after the supervision/mentoring mission with the facility administration and health personnel individually and compared later during the follow-up supervision mission.

The achievements attained by the project would have not been possible without strong project implementation team. Ensuring regional representation in project targeted location through UNICEF’s Zonal office alongside with involvement of the national consultant, at the one hand ensured effective communication and cooperation with the MOH, oblast and municipal administrations and on the other hand enhanced linkages between national and local level professionals and facilitated knowledge and experience sharing.

**EFFECTIVENESS**

To date UNICEF’s part of DaO project activities were focused on hospitals in the most vulnerable rayons. The coherence and complementarity of two projects (DaO and Equity) produced the following results:

**The project supported the strengthening of national and sub-national capacities**

**National clinical guidelines developed and practiced,** which constitutes significant progress compared to the past;

**National and Regional Training Capacity is built.** Moreover, the capacity of National Trainers is widely deployed in monitoring and supervision visits to the facilities in project-targeted regions.

**Quality of Service has been addressed at the national level.** The MoH introduced the Service Quality and Pharmaceutical Policy Department in the organizational structure of the Ministry of Health in 2013. To fill the gap until there is a fully operational dedicated structure of continuous quality improvement, the
UNICEF financed regular monitoring of the perinatal service quality through the project by involving international, national and local specialists in respective service areas. The findings of the quality monitoring missions and follow-up actions are discussed with the management and staff of assessed facilities.

**Accreditation of medical facilities introduced.** The mandatory accreditation of medical facilities has been introduced in Kyrgyzstan. The accreditation assessment tools reflect all EPC elements. Two facilities visited completed the accreditation process recently.

**The project supported institutionalization of Newborn Registers.** In order to improve quality and completeness of data collection on maternal, newborn and children under one year of age, as well as to monitor effectiveness of PC Program in the republic, an individualized database “Register of Newborns, Maternal and Infant Mortality” has been launched, which would allow policy makers to make evidence based decisions.

**Maternal and Infant Mortality Commissions established at national and sub-national levels but mostly serve as a punitive structure.** A decade steps have been put forward for introduction of the maternal and infant mortality commissions at national and oblast levels, that reviews each mortality case as well as mortality notification system by the government. The national commission recently completed the **confidential enquiry of maternal death** for the years 2011 and 2012 and the results were presented and discussed with the head doctors of all hospitals in the country. While the mortality audit system seems to function, its punitive nature undermines the purpose and effectiveness of this structure.

**Statistical Forms reflecting PC indicators desire perfection.** Substantial improvement of the monthly statistical forms has been observed, however there is a considerable space for further improvement of data collection and analysis by integration of the quantitative PC service quality indicators with adequate disaggregation. The latter will enable policy makers to routinely collect wider range of data and plan informed strategic interventions in the system.

**Financing of the PC services requires improvement.** In order to improve PC in the country and provide equal access to women and children to quality services, the government fully finances services through case based financing at in-patient care and per capita funding for antenatal and postnatal care services. While this demonstrates government ownership and attempt to ensure financial accessibility to quality perinatal services, according to the MHIF representative interviewed, PC service case rates do not correspond to the actual costs of services and requires revision.

**Building MHIF staff capacity in application of EPC guidelines and protocols for claims management resulted in decrease of financial penalties of providers.** Providers interviewed highlighted lack of knowledge and awareness of MHIF staff in new protocols and referral algorithms resulting in issuance of financial penalties during by-annual case reviews. UNICEF was instrumental in addressing this issue in 2013 in Osh Oblast. The first signs of improved case revisions and claims adjudication have been observed in Osh Inter-territorial Hospital, where financial penalties introduced to the maternity department decreased by 70% compared to previous year.

**The DaO project supported integration of PMTCT into EPC – The integration of PMTCT into EPC strategy was piloted in Osh Oblast with UNICEF’s support.** The given approach already shows positive results. Number of pregnant women tested at PHC level during pregnancy is increasing, judged by the decreasing trend in number of rapid tests administered at maternities during delivery. It is notable that in all maternities visited ART medicines and tests were readily available for women and children.

**Medical and Administrative Practices, alongside with service quality improvement and rational use of resources are evident, but room for improvements yet remain.**

The Managers are satisfied with introduction of EPC that helped to change administrative practices. According to hospital managers interviewed, institutionalization of EPC helped to understand the different approach of service organization and has been applied to other departments as well; helped to decrease expenditure on medicines and allocation of more funds to the consumables and infection control materials and supplies; decrease of complications consequently shortened the average length of stay and lowered expenditures on treating complicated cases and staff salaries. In summary introduction of EPC helped the hospital to save money that could have been used for improvement of infrastructure purchase of medical equipment and ensure adequate supply of basic lifesaving medicines and supplies for maternity department.

**There is a proven evidence of functional regionalization system, however criteria for the referral and transportation system are deficient.** The data collected from each level of perinatal services demonstrates increase in number of deliveries and referrals to the tertiary and secondary level maternities. Operationalization of referral system resulted in
decrease of Early Neonatal Mortality (ENM) and Neonatal Mortality (NMR) at first and tertiary level maternities. While these data shows a positive trend it has to be treated with caution. Key informants from the secondary and tertiary level maternities perceive that women are referred to these facilities without strong justification for referral. The rapid increase and uncontrolled referrals results in overutilization of high technology maternity beds and negatively affects the service quality.

Inadequate operation of emergency transportation system for high risks women and newborns was named as an important obstacle to programme effectiveness. Mostly there is only one professional emergency ambulance vehicle fully or partially equipped with necessary equipment and oxygen or an old soviet style ambulance car without heating and necessary equipment. Patients mostly use private vehicles for transportation.

Improved teamwork and organization of workplace is evident. This aspect of the EPC approach has been highly appreciated by staff at all levels who understood the importance of the coordinated action and EPC trainings and protocols equipped them with the means to deploy teamwork in the practice. Another contributing factor for improved teamwork being named is improved organization of workplace and availability of emergency kits for mothers and newborns, however the emergency kits are not always complete and/or contain medicines not included in national protocol.

The support of the project in capacity building of health personnel at all levels of perinatal care system is highly appreciated and acknowledged. The project supported three main training courses: Effective Perinatal Care (EPC), Neonatal Resuscitation (NR) and Effective Neonatal Care (ENC). Over the course of the project 88 % staff (1472) of 25 perinatal institutions representing all levels of perinatal system were trained. Personnel interviewed expressed the need for regular on-job trainings, through more frequent supervision visits for further enhancing knowledge and skills.

Insufficient and/or inappropriate distribution of human resources, migration of trained personnel to other countries, alongside with inflow of poorly trained young professionals emphasizes the importance of refreshment trainings and continuous professional development needs.

Internal training courses are organized for young specialists in most of the facilities visited. In order to fill the knowledge gap, heads of the maternity wards initiated internal training courses, where more experienced and senior staff regularly provides trainings to the young professionals.

Results of the new approaches to delivery management are further undermined by demoralization of personnel with widely practiced punitive administrative measures. Administrative sanctions and financial penalties is a common practice in the sector practiced by supervising / controlling institutions as well as by facility management.

Financial motivations introduced and practiced in the health care system hardly serve the purpose and informal payments underline different behaviors. The monthly bonus pay introduced by the MOH and paid by MHIF, allocates funds to the facilities based on the criteria that do not contribute to the improvement of the service quality.

UNICEF supported equipment improved maternal and newborn survival. While UNICEF supported equipment, emergency kits and other supplies proved to be effective, availability of functional basic medical equipment, medicines and consumables requires improvement. Although most of the facilities targeted under the project received substantial support from UNICEF and other partners, if equipment needs are not addressed it will undermine achievement of desired outcomes and impact. Difficulties in equipment maintenance and repair have been named as another impeding factor by most of the facility heads interviewed. When funds for equipment maintenance and repair are made available, the country experiences shortage of qualified medical engineers and spare parts.

While effective and efficient use of medicines was named as one of the benefits of the EPC programme and allowing facilities to improve continuous supply of medicines and consumables, shortages and stock-outs still remains to be evident. There are cases where facilities experience stock out of medicines and consumables for 2-3 month. A combination of different factors appears to impede continuous supply effecting quality of care and shifting financial burden to the patients.

Poor diagnostics and laboratory capabilities are another bottleneck for the quality service provision. As an example, as Viral Load testing for HIV positive women is not performed in the oblast Aids Center, according to the guidelines C-sections are performed thus eventually contributing to the increase of the C-section rates. The quality of the laboratory test is often question by the physicians.

Service Quality improved, though still remains insufficient

Partner deliveries and Vertical deliveries alongside with rooming in and exclusive breastfeeding
are widely practiced. The ET observed two cases when after C-section the first skin-to-skin contact was performed with the partner. Mothers are encouraged to take care of their babies. The “Mother Checklist” is institutionalized, when mother has to record regularly temperature, stool, regurgitation, feeding etc. on a checklist. While this initiative is highly valued, the lack of mother’s awareness on the importance of the checklist as well as poor monitoring of these vital signs from medical personnel undermines the effectiveness of the initiative.

Introduction of EPC ensued decrease of complications and share of unjustified C-sections. Substantial decrease (27%) in the cases of hemorrhage, complications (4%) during and after delivery and medically unjustified C-sections (23%) is recorded in selected health facilities. While the positive trend in number of complications is evident, MMR demonstrates an increasing trend mostly explained by delays in referrals of high-risk group women.

Introduction of Neonatal Resuscitation Training (NR) resulted in decreasing trend of Early Neonatal Mortality (ENM). While ENM is reducing (18%), increase (15%) is observed in Neonatal Mortality Rate (NMR) mostly due to the substantial increase of stillbirth cases (93%) out of which more than a half is prior to labor. The latter indicates the poorly recognized, untreated or inadequately treated maternal conditions including hypertensive disorders and infections during antenatal period.

Decrease of number of sick newborns is another observed result of project effectiveness, mainly due to the less cases of asphyxia, birth trauma and hypothermia since introduction of EPC. Specifically, improved management of deliveries, prevention of the distress syndrome with Dexamethasone, dry open management of umbilical cord, rooming in, breastfeeding has been noted as factors contributing to decrease of newborn complications and increase of survival.

Decrease of ALOS – decrease of average length of stay is another indication of the benefits of EPC programme introduced at each level of perinatal care. The review of the statistical data of facilities visited, revealed decrease of ALOS for delivery wards on average from 5 days to 3.5 days.

Changes in service organization and quality assurance practices are evident but still deficient. Facility Service Quality Commissions established and functioning though need to be strengthened. The commission performs monitoring of the service quality on a quarterly basis and prepares reports on the findings. Based on the revealed weaknesses, identifies areas for improvement and assigns responsible staff member and the latter provides periodic training, explanations to the staff as well as monitors progress. While initiation of the clinical audits is definite positive move towards continuous quality improvement, the commission and the management lack knowledge and tools to plan corrective measures, rather utilize punitive measures to penalize the PHC facility by not paying the monthly bonus. The given approach will shortly undermine the benefits of the continuous quality assurance if adequate measures are not put in place.

Local protocols/algorithms developed and approved, though quality and compliance requires improvement. Based on the national protocols facilities developed and approved local protocols and algorithms customized to their facility using internal intellectual potential, however, direct observations and criterion based audits of the medical cards performed during the evaluation, revealed poor quality of the local protocols, serious deviations form the national guidelines, as well as in certain cases non-compliance with guidelines.

While weaknesses in service quality are noted, the evaluation also documented improvements of some quality aspects in service delivery at maternities.

SUSTAINABILITY

UNICEF planted seeds for Perinatal Care sustainability in Kyrgyzstan. UNICEF has become a leader and reliable partner in the MCH sector and PC in particular. Several informants have stated that the agency has “planted the seeds of MCH/PC which will result in sustainment of PC in the country”. The Project was able to develop capacities at the enabling environment, organizational and individual levels. Project components have mostly worked through Government systems and sub-national service providers as well as through selected Professional Associations.

Government demonstrates a stewardship role in improvement of maternal and child health services. The key challenges of the MCH system is addressed and targeted within number of national policy documents. More specifically, the Kyrgyz poverty reduction strategy; Den Sooluk National Health Reform Programme, National Perinatal Care Programme, National Reproductive Health Programme, National HIV/AIDS programme and etc. are the examples of government’s dedication and ownership towards achievement of the MDG 4 and MDG 5. Apart from these policy documents, the MOH has approved national evidence based guidelines for effective perinatal care, neonatal resuscitation, effective neonatal care, PMTCT, effective antenatal care, nutrition, IMCI etc.

Country demonstrates ownership for Free maternity services delivery - The free of charge service provision for perinatal services is another demonstration of government’s ownership and dedication for
improvement of the MCH services.

**UNICEF supported strengthening of Government’s institutional capacity in service quality assurance**. The project facilitated strengthening of MoH capacity in continuous quality assurance through provision of service quality monitoring tools and building critical mass of national experts.

**Integration of PC training materials in the post-diploma education curriculum is a step forward for sustainment** - High advocacy of UNICEF facilitated integration of the new technologies of the perinatal care into the post-diploma education curriculum. While integration of PC training materials into the post-diploma education curriculum is a step towards sustainment, in isolation from undergraduate/pre-service education reform, will be shorthanded to secure production of knowledgeable and skilled medical work force. In addition, building the training capacity of trainers within the education institutions as well as at clinical/practical training facilities also requires being addressed. Furthermore, introduction of the health workforce planning based on the estimation of health workforce production, deployment, and retention strategies deserves due attention. In the absence of such plan, there is a potential devastation risk of the capacity produced slowly and shortages of qualified perinatal services in most difficult to reach areas in the country.

**DaO project supported building national and sub-national training capacity** - The Master trainers trained through DaO by the WHO and utilized by UNICEF and UNFPA in their training activities, ensure availability of the pool of national and local master trainers. Moreover, UNICEF supported building national and oblast level training capacity through training of trainers, provision of training equipment and materials to training facilities.

**Health facility accreditation system incorporates new technologies of perinatal care**. It is notable, that accreditation criteria and indicators for maternity hospitals and wards are mostly based on the new clinical guidelines and protocols, which consequently will ensure continuous improvement of perinatal services in the health care institutions of Kyrgyzstan.

**Institutionalization of “Confidential Inquiry to Maternal Death” is another demonstration of Government’s ownership**. Within the DaO project as a result of the advocacy efforts and technical assistance from WHO and UNICEF, the MoH completed first “Confidential Inquiry to Maternal Death” in December 2013, covering the period of 2011-2012 and resulted in prioritization MoHs efforts in strengthening emergency obstetric care capacity in the country.

While there is a demonstrated ownership at the central level, sub-national level of government still has to show substantial degree of political commitment towards improved maternal and child mortality reduction. While national-level commitment to maternal and child mortality reduction is growing, it is equally important for sub-national levels of government (oblasts and municipal government) to show substantial degrees of political commitment particularly oriented towards organization and funding of emergency transportation and consultation services.

**Absence of the strategic vision for organization of Emergency Transportation and Consultation Services alongside with the lack of creative solutions to ensure uninterrupted supply and availability of blood products in maternity facilities** will undermine country’s efforts and potential achievements in meeting MDG 4 and MDG 5.

**The lack of strong managerial capacity in the country is another factor that hinders potential achievements in improving maternal and child survival and health status in Kyrgyzstan**. Where-as introduction of the new evidence based perinatal care technologies already shows initial positive results, maximization of its potential and sustainment is hindered by poor managerial capacity at facilities. If the government in the nearest future does not address building health facility managerial capacity, it is unlikely that government targets for reduction of maternal and child mortality could be attained.

**Continued efforts and further nation wide expansion of PC model introduced in south regions of the country is required to ensure long lasting results**. Although the reform of the perinatal care is piloted in other oblasts and selected districts of the country, the MoH realizes the need for applying universal PC model, piloted by UNICEF in Osh and Batken oblasts. Only partial coverage of the country will not be able to demonstrate accomplishment of the MDG targets in a relatively short period of time.

**RECOMMENDATIONS**

This section provides key recommendations based on the findings of the evaluation, priority issues affecting effectiveness of perinatal care and health status of children and women in the country, and suggests possible strategic interventions for the Government and its development partners.

**GENERAL RECOMMENDATIONS:**

**Continued support to GOK’s Perinatal Care Strategy Implementation** - In MCH sector, UNICEF is recognized as one of the leading agencies. This confirms its legitimacy and the capacity to continue work in MCH
area and EPC in particular. Ensure continuous support to the GoK’s perinatal care programme implementation in line of recommendations provided below.

**Strengthen inter-agency collaboration** - Continue and further improve inter-agency collaboration where all partners, building on their comparative advantage, will have a role to play in supporting the MoH in the implementation and update of programmes in the area of perinatal health, including further investment in strengthening the main health system components, and policies to reduce inequities in access to care, as well as in the quality of services provided, all of which will further improve the health status of mothers and children in Kyrgyzstan.

**Enhance advocacy** - The new challenges identified, in the section below, will require promotion of greater linkage and partnership through strengthening of the UNICEF Country Office (CO) technical capacity in the health policy advice. When selecting final set of interventions for the new project phase, attention has to be paid to CO capacity. Some recommended actions might demand specific technical expertise, which require additional resourcing. Moreover supporting research and analysis of the MCH sector performance will be instrumental for effective advocacy. Building on “what’s already working” will help to influence the government policy decisions.

**Improve project design** - Comprehensive Project design, addressing all health system blocks, with clear distribution of functions (activities and geographical and or thematic areas between key UN agencies), coordination mechanism between UN and other developing partners, as well as well formulated Results framework with annual targets, should be given a priority.

**SPECIFIC RECOMMENDATIONS:**

Though UNICEF is well positioned to influence the PC policy in the country, success of the perinatal services will very much depend on going beyond the perinatal care sector and targeting other health sector policy areas. While bellow outlined recommendations are not explicitly targeted for UNICEF assistance, evaluation team considered listing the most important system building blocks requiring intervention on the national level in order to ensure that UNICEF interventions are sustained and ensures access to quality PC services to the population.

**STEWARDSHIP**

The National Perinatal Care Program is good demonstration of government’s dedication and attempt to meet MDG 4 and MDG 5 targets. While the programme is well formulated and is results oriented, the MoH fails to regularly assess the progress in achieving the set objectives. It is highly recommended that regular assessment of programme implementation is practices that enable timely identification of problems and evidence based decision making for corrective actions.

Introduction of the “Confidential Enquiry of Maternal Death” serves as another strong examples of government’s ownership. Recently released analysis sheds the light on main problems and provides recommendations to the policy makers for further action. Thus the MoH has to institutionalize this practice and ensure uninterrupted and adequate funding for this purpose. Analysis also revealed necessity for improved management of emergency obstetric cases. Therefore, development and approval of emergency obstetric care guidelines and protocols alongside with training of health personnel requires urgent attention if the country wants to rapidly decrease MMR. Alongside with the new EmOC guidelines, the evaluation revealed a need in expertise and revision of the facility based EPC protocols in line with the nationally approved ones.

Furthermore, under the leadership of the MoH the system of “Near Miss Cases” investigation has to be promoted at national, sub-national and facility levels through insurance of adequate funding.

**HUMAN RESOURCE DEVELOPMENT**

The Government of Kyrgyzstan acknowledged the lack of human resources needed to deliver essential quality perinatal services for a number of reasons, poor quality of pre-service education, migration of health workers within and across countries, poor mix of skills and geographical demographic imbalances. The formulation of policies and plans in pursuit of human resources for PC services requires sound information and evidence. The need for comprehensive, reliable and timely information on human resources, including numbers, demographics, skills, services being provided and factors influencing recruitment and retention has been identified in Kyrgyzstan. Based on this information the priority should be given to the development of the health workforce plan including the plan for the development of the PC workforce. The latter should address production, deployment and continuous professional development of health personnel. While such strategy is needed for entire health sector, initially the government can
develop it only for the MCH sector.

Apart from PC human resource plan, the government is advised to streamline the pre-service and post diploma education systems alongside with the refinement of licensing and certification of the medical professionals. There is a need for enhancement of the continuous medical education by integration of the new perinatal technologies into the training curricula, training of master trainers, selection of clinical bases, as well as development of the mentoring capacity in EPC.

Another important area for immediate intervention is formation of Emergency Transportation and Consultation (EMTCS) System as well as definition of staffing levels and training of EMTC teams in EmOC.

Mandatory Health Insurance Fund, the single payer in the country, will also require being equipped with modern knowledge of perinatal technologies in order to perform effective adjudication of provider claims in perinatal care.

INFRASTRUCTURE, EQUIPMENT AND MEDICINES

In line with the regionalization of the perinatal care services, the MoH initiated development of the PC master plan for selected oblasts and districts, which guides investments decision for these geographic areas. As the health facility infrastructure and medical furniture and equipment are outdated, the MoH is advised to expand the master planning exercise countrywide, development of facility investment plan and ensure its periodic revision due to the possible future local and international investments. Alongside with the latter, development of the EMTC system design, investments plan and its realization should be given a high priority.

In order to ensure access to essential and lifesaving medicines at PC facilities, it is recommended that MoH periodically reviews the list of essential and lifesaving medicines and through its regulatory function ensures continuous availability and supply of the pharmaceutical market with these medicines.

Another area deserving immediate MoH attention is design of alternative blood supply system to ensure uninterrupted supply of blood products at the perinatal care facilities. The current system, when the patient’s relatives have to travel to the Blood Bank located in the oblast center and pay out of pocket, could be redesigned in a way, when relatives pay at the facility (in worst case scenario if the GoK can ensure funding) and the Blood Bank ensures delivery of blood products directly to the facility and maintaining the cold change regimen during transportation.

FUNDING OF PERINATAL CARE

AND STAFF REIMBURSEMENT MODALITIES

The GoK’s commitment for free perinatal care services are challenged by inadequate service case rates and weight resulting in underfinancing of health providers. Deficient reimbursement became more problematic with the introduction of the regionalization of perinatal services where the same case rates are applied for perinatal services regardless of the level of service provider. The situation is further complicated with absence of standardized claims management methodology, mostly based on previous service provision practices and poor understanding and knowledge of claims managers in new perinatal service provision technologies and referral guidelines, thus resulting in introduction of financial penalties to the health providers. Filling these gaps is a high priority for the MoH. There is an urgent need to revisit the case rates and case weights in line with the regionalization of perinatal services as well as development of standardized claims adjudication methodology based on newly introduced service protocols.

The current performance pay system implemented in the health care system is shorthanded and requires revision of the performance indicators. It is believed that the WB financed project will assist the government in introduction of new pay for performance system that potentially could be applied in those facilities, which are targeted by UNICEF, and falls in the group of pilot facilities under the WB financed project.

CONTINUOUS SERVICE QUALITY IMPROVEMENT

Assurance of the population access to quality PC service is important for attainment of the MDGs. The MoH already established the QoC and Pharmaceutical Policy Department at the MoH. Apart from this, the QoC committees are operational at the health facility level though with limited national guidance. Whereas availability of these structures demonstrates government’s ownership of the service quality improvement, much remains to be done to ensure well functioning service quality assurance system in the country. More specifically, the MoH needs to develop the QoC strategy, QoC audit processes and tools as
well as implementation plan and budget. Enhancement of external and internal MCH service quality audit system in the country will have the following benefits: a) it will enhance ownership at facility, district, oblast and national levels, b) created PC service quality audit capacity will improve evidence based managerial decision making at facility and local levels, as well as evidence based policy development on a national level; c) it will require less financial resources; d) the benchmarking of service providers will increase the competition and motivate them to better perform; and finally all the above will ensure improved access to quality PC services.

HEALTH INFORMATION SYSTEM

Sound and reliable information is a foundation of decision making across all health system building blocks. It is essential for health system policy formulation and implementation, governance and regulation, human resource development, health education and training, service delivery and financing and health research. The health information system serve multiple users and a wide array of purposes that can be summarized as the generation of information to enable decision makers at all levels of the health care system to identify problems and needs, make evidence based decisions and allocate scarce resources optimally.

The MOH was successful in introduction of the Newborn Register and institutionalization of reporting nationwide. Apart from Newborn Register there is a need for routine reporting on key quantitative service quality indicators. MOH is advised to integrate some of these indicators, currently being monitored by the project, into the routine reporting forms. Moreover, in order to ensure accuracy of MCH data collection, the MOH is recommended to build the capacity of the Data Quality Audit (DQA) at national and local levels. The project can be instrumental assisting the government in this endeavor.

Building MCH/PC analytical as well as evidence based policy and managerial decisions making capacity at national and local levels is another area requiring government attention. Based on the evaluation findings the MOH and the health facility management lack the capacity of data analysis, which leaves the latter shorthanded for the evidence based policy formulation and decision-making. Present Health Statistical Reports is informative; recording changes of selected indicators over the years, but does not contain analysis, which attempts to explain reasons behind reported changes. The MOH is recommended to build the national and local capacity for MCH/PC data analysis with the assistance from international partners. This will help the sector to plan further interventions based on the evidence, leverage additional resources for the sector as well as allocate scarce resources optimally.
CHAPTER 1: INTRODUCTION

1.1 COUNTRY SITUATION

Kyrgyzstan remains the second poorest country in the Central and Eastern Europe and the Commonwealth of Independent States region. Despite significant decreases in poverty between 2003 and 2008 — overall poverty declined from 64 to 31.7 per cent and extreme poverty from 28 to 6.1 per cent — one in five children is still poor, and three-quarters of child poverty occurs in rural areas. Recent declines in poverty levels resulted largely from massive migration from poverty-stricken rural areas to cities and to the Russian Federation and Kazakhstan. In 2008, Kyrgyzstan was the fourth most remittance-dependent country in the world.9

The effects of the global economic crisis in 2009 (including sharp reductions in exports, and a 15 per cent fall in remittances), as well as the instability of 2010, will have lasting impacts on vulnerable groups, including women and children. In June 2010, violent civic unrest in southern Kyrgyzstan resulted in at least 415 deaths and large-scale property destruction10. Approximately 400,000 children were affected. Many fled their homes, while others suffered psychological damage and interruption of schooling.

By mid-2010 the budget deficit had risen above 10 per cent, and national debt was growing. These major economic and financial challenges were likely to reduce social spending and delay important reforms in key sectors.

1.2 MAIN CHALLENGES OF MCH SECTOR MORTALITY RATES AND LEADING CAUSES OF MORTALITY

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). 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 per cent, while the global average is at 3.1 per cent11. According to Republican Medical Information Center (RMIC), MMR in 2012 was 50.3 per 100,000 life birth (LB) (63/100,000 LB in 1990). National Statistical Committee (NSC) reported a MMR was of 54.8/100,000 LB in 2011 (62.9/100,000 LB in 1990)12.

There is a disparity in MMR among regions (oblasts), being higher in mountainous and poorly socio-economically developed regions ( Jalal-Abad, Naryn and Issyk-Köl). MMR is higher in rural areas (1.9 times) than in urban ones13.

Mortality among under-fives is showing stronger downward trends. From 1990 to 2012 USMR has declined by 62%, and the annual rate of reduction (1990-2012) is 4.4%.14 In its ongoing monitoring the Ministry of Health reported an annual 7 per cent reduction to 28.9 per 1000 live births in 200915, and links this to the implementation of efficient perinatal services – rational delivery management, better promotion of and practice of breastfeeding, a better-functioning heating network, and timely neonatal resuscitation16. The UNICEF figures, which are consistently higher than the Ministry’s figures, report 38 deaths per 1000 live births in 2008, half of the number in 1990, but still off target for 25 deaths per 1000 live births in 201517.

There are also key equity concerns in provision of healthcare for births. While 96.3 per cent of mothers in the richest quintile are supported by skilled healthcare workers in their deliveries, for the poorest quintile, only 60.1 per cent received skilled care18. The results of the 2006 MICS show that the infant mortality rate in rural areas is 1.4 times higher than that in urban areas.

The reasons for high levels of maternal mortality are diverse. The most common proximate causes recorded are hypertensive disorders in pregnancy (40.0%), hemorrhage (21.5%) and septic complications. Many women of childbearing age suffer from anemia and poor nutrition. Osh province has particularly high rates of deliveries complicated by anemia 67.1 % in

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9 International Monetary Fund

11 MDG Acceleration Framework, Kyrgyzstan, 2013
12 The Kyrgyz Republic. Third report on progress towards achieving the Millennium Development Goals* UN Kyrgyzstan 2013.
13 The Kyrgyz Republic. Third report on progress towards achieving the Millennium Development Goals* UN Kyrgyzstan 2013.
15 Situation assessment of children in the Kyrgyz Republic. UNICEF 2011
16 Ministry of Health, Manas Talimli Indicators, 2009
17 UNICEF, Progress for Children – Achieving the MDGs with Equity, Number 9, September 2010
18 GTZ, Review of the situation on mother and newborn health care in the Kyrgyz Republic for the period of 2008-2009, 2009
2008 and 71.2% in 2009.

**Many mothers register their pregnancy late.** Many internal migrants without residence registration are not registered with healthcare professionals in their new home areas. One third of women who died in childbirth in 2009 had not received antenatal care from healthcare professionals19.

The most common underlying causes of neonatal mortality are birth asphyxia, prematurity, congenital malformations and infections20.

**NUTRITION**

**Under-nutrition** is an important public health problem. Stunting, low birth weight, and vitamin and mineral deficiencies are major barriers to the country achieving its MDGs. Results of the 2006 MICS survey showed that the nutritional status of Kyrgyz children remains poor. In 1996, 14% of children under 5 were stunted, compared to almost 25% of children less than 3 years in 2006. The prevalence of stunting was higher among children in rural areas (15.7%) than in urban areas (10.8%). Children of educated mothers and richer families were less likely to be stunted. The prevalence of wasting is only 4% nationwide, but substantially higher in Jalalabad (9.2%) and Issyk-Kul (7.8%) provinces.

In 2006 over 5.3% of children born in the country were of low birth weight. In Naryn province the figure was 10.3%, and low birth weight is more common in the richest quintiles21.

Malnutrition is an underlying cause of 60% of deaths among children under five in Kyrgyzstan. Only 31.5% of infants are exclusively breastfed and only 37.5% of infants are adequately fed. Meanwhile, figures for vitamin A supplements taken by women in the first eight weeks after giving birth were particularly poor in Naryn Province (19.6%) and among Uzbek families (36.3% (2006))22.

The 2006 MICS survey recorded particularly poor iodine content in salt in Osh Province, where only 56.8% of salt tested contained more than 15 parts per million of salt. There are also equity concerns, with only 68.5% of salt consumed by the poorest quintile containing adequate iodine levels, compared with 89.9% of that consumed by the richest quintile. Approximately 70% of children suffer from iodine deficiency, and 32.9% from vitamin A deficiency23.

The share of women who indicated that they were diagnosed with anemia is 45%. There is a significant geographical variation on these indicators. In Jalalabad the share was 76% whereas in Batken and Osh oblasts it was 35%. 94% of women received treatment for anemia.

**HIV/AIDS**

HIV and AIDS is another area of concern. Newly registered cases have increased by 25% annually over the last decade, making it unlikely that the country will meet the target for Millennium Development Goal 64. Rates of drug dependency and HIV infection are high in the city of Osh, which is located along major drug-trafficking routes.25 In recent years, around 300 young children were infected with HIV in medical facilities in Osh and Jalalabad. Women and children diagnosed with HIV suffer wide-ranging stigma and discrimination.

**ANTIQUATED PERINATAL INFRASTRUCTURE**

The healthcare system in the country is developed, with an infrastructure of facilities providing maternal and child health (MCH) care services, at national, regional, district and local level. The system includes maternity hospitals and departments, and a network of rural health points (known by their Russian acronym– FAPs). The healthcare system is severely constrained by antiquated infrastructure and a lack of funds for development. A study carried out in 2009 revealed that two thirds of hospitals in the country were built more than 25 years ago. Most do not have central heating, running hot water and sewage systems. Cold water is available in half of district hospitals and maternity wards, and none are supplied with running hot water. Throughout the healthcare system, and particularly in rural and remote areas, there are shortages of drugs, medical equipment and skilled healthcare personnel, particularly in facilities providing services to women of reproductive age and children24 27.

**ACCESS BARRIERS TO QUALITY EMERGENCY SERVICES**

Ministry of Health.
The access to good-quality emergency and primary hospital care services for pregnant women is insufficient. One of the reasons is a shortage of qualified personnel and specialized care at these two healthcare levels, resulting in low-quality treatment. At these levels the maternal mortality is 1.5–2 times higher than at the secondary care level and the main causes of deaths were the emergency obstetric conditions.

The majority of pregnant women die during labor outside the regional maternal hospitals or perinatal centers due to the lack of well-timed delivery of emergency care or poor quality of this care. It should be noted, that there is a problem of insufficient medical infrastructure and equipment. Other problems include a lack of criteria for the well-timed referral of patients to appropriate specialists and obstetric facilities.

Some primary health care facilities in remote areas have hospital beds designed for deliveries but often lack appropriate equipment and qualified personnel, making it impossible to ensure the safety of both women in childbirth and newborns. Rural areas also suffer from shortages of ambulances and fuel. The particular problems of these remote areas are evident in maternal mortality figures – over 2005-2010, the highest rates are seen in the remote mountainous districts of Toguz Toro and Chatkal (Jalalabad province), Tong (Issyk Kul province), Manas (Talas province) and Naryn and Aktalaa (Naryn province). Meanwhile, districts and cities in the Chuy and Fergana Valleys consistently show much lower maternal mortality rates.

**HUMAN RESOURCES**

Another factor behind high mortality rates is a significant staffing crisis in the healthcare system. Reasons include low pay and a lack of incentives to work particularly in rural areas. This leads to internal migration and a significant outflow of trained health care specialists to Russia and Kazakhstan, where salaries are much higher. In 2008, the highest outflow was from Osh and Jalalabad provinces.

There is a catastrophic shortfall of medical personnel, especially gynecologists servicing rural areas. 40% of all gynecologists and obstetricians are concentrated in Bishkek and Osh, and a lack of qualified practitioners to oversee pregnancies, particularly when complications arise. According to preliminary data from the Ministry of Health, there were only two obstetrician-gynecologists in the Batken province in 2009. The last decade has witnessed a consistent drop in the number of practicing pediatricians (from 4.4 per 10,000 population in 1998 to 1.0 in 2008) and neonatologists (from 0.6 to 0.3) in the country.

It is noted that medical staff at the primary care level are often low qualified and therefore do not know how to follow-up pregnancies and not capable to recognize the complications at earlier stage. Moreover, there is lack of well-qualified obstetrician/gynecologists knowing the safe management of childbirth.

The factors most responsible for maternal mortality are preventable. Their continued prevalence is a result of insufficient education of the population about the main signs of threats to pregnancy. The population, especially in rural areas, remains unaware of family planning methods, reproductive health, and safe contraception. In 2002, rural health committees were established to help educate the population on issues, including reproductive health. These initiatives are especially important given societal taboos; existing stereotypes and traditions mean that there is little discussion of the problems of sex and reproductive health among family members or friends. There is also a shortage of specialized literature on how to lead healthy lifestyles, raising children, and family planning. This means that there are still a large number of abortions, and one-tenth of registered maternal mortality cases are caused by abortions.

**AWARENESS, KNOWLEDGE AND PRACTICE**

54% of women with children under the age of 5 are aware of 4 or more symptoms of complications during pregnancy. It should be noted that significantly higher level of awareness were found among women in Batken oblast, compared to those in Osh and Jalalabad oblasts (77% versus 39% and 34% respectively). 5 problem zones were identified: Chong-Alai (zone 2), KaraSuu (zone 4) and Ozgon (zone 7), BazarKorgon (zone 8), Suzak (zone 10).

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29 In 2009, the average salary for healthcare workers was 63.4 per cent of the average wage in the economy. [Roman Mogilevskiy, Public Social Expenditures in Kyrgyzstan: Trends and Challenges, Presentation made at the Roundtable “Investing in Children – a Key to the Achievement of the Millennium Development, 20 November 2010]. The Government is aware of this issue and has pledged to more than double the salaries of healthcare workers as of 1 May.
30 GTZ, Review of the situation on mother and newborn health care in the Kyrgyz Republic for the period of 2008-2009, 2009
33 Situation assessment of children in the Kyrgyz Republic. UNICEF 2011
34 Study of knowledge and awareness among the population of Batken, Osh, and Dzhalalabad oblast of the danger signs of childhood illness and complications in pregnancy and knowledge of rights to social benefits. July 2012. UNICEF
CHAPTER 2: PROJECT OVERVIEW
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During 2009-2013 three major UNICEF projects have contributed to improvement of perinatal care. In 2009-2010 UNICEF implemented a project Reforming Perinatal Care System in Kyrgyzstan that aimed to reduce perinatal mortality by creating an enabling environment for the implementation of National Perinatal Care Improvement Programme for 2008-2017 mentioned above, enhancing expertise on perinatal care on the national level, supporting establishment of Baby Friendly Hospitals as well as by monitoring through national newborn register. Building on these activities, a project on “Ensuring Access to Affordable Health Services in the Affected Areas of the Country for Women of Reproductive Age and Newborns” was initiated by UNICEF during 2010-2013. The project was part of Kyrgyzstan’s One UN Programme funded through the Expanded Delivering as One (DaO) funding window and implemented jointly with UNFPA and in some extend, with WHO in Batken and Osh provinces.

In addition to projects described above, in the period of 2010-2011, the “Post emergency and early recovery project” funds were use that supported the pilot sites with emergency obstetrical kits and newborn resuscitation equipment, better access to water (clean and hot water) and improvement of sanitary conditions in pilot maternity facilities through rehabilitation of the sewage system. After the civic conflict in June 2010, the “Equity projects” (2012-2015) were initiated in Osh, Batken and Jalal-Abad provinces after the. As the previous UNICEF projects have enhanced perinatal care on the secondary hospital level, the ongoing Equity project operates mainly on the primary health care level.

2.1 PROJECT OBJECTIVES:

Overall objective of the project is to reduce perinatal mortality in the Kyrgyz Republic

Specific objectives are to enhance equitable access to health care services of the poor and vulnerable groups by improving the quality of maternal and newborn care and monitoring data in selected maternity hospitals.

2.2 EXPECTED PROJECT RESULTS, ACTIVITIES AND KEY INDICATORS:

Expected results are:

- Continuous Quality Improvement process demonstrated, institutionalized in maternity hospitals
- Enhanced capacity of medical experts on the national level
- Improved quality of antenatal and perinatal care through critical lifesaving equipment, infrastructure
- Improved practical skills of medical workers for antenatal and neonatal care in target primary health care clinics and 20 selected maternity hospitals (introduction of Making Pregnancy Safer, Effective Perinatal Care, neonatal resuscitation, Baby Friendly Hospital Initiative)
- Effective registration and monitoring system in place including analysis of critical cases (i.e. pregnancy registration, Newborn Register, The Near Miss Cases Review)
- Adequate referral and remote consultation system in place
- Improved accessibility and utilization of maternal and newborn services especially in rural and remote areas through increased level of awareness among the population

Main Project Activities:

- Advocacy for Quality Improvement, organization of local and national round tables, workshops, clinical conferences
- Trainings for Trainers (ToT) on antenatal care, perinatal care, newborn resuscitation
- Trainings for medical workers on antenatal and perinatal care, newborn resuscitation
- Regular monitoring and supervisory visits in health facilities
- Support for the newborn registration system
- Establishment and support for birth preparedness schools
- Procurement of medical supplies, improvement of infrastructure
- Development and printing of communication materials

Key indicators:

- Percentage of the hospitals trained on resuscitation of newborns and equipped with Ambu bags and mannequins for trainings
- At least 60% of maternities certified as Baby
Friendly Hospitals based on the WHO/UNICEF criteria

- Percentage of medical staff trained on Effective Perinatal Care technologies
- Percentage of health facilities introduced with electronic registration system
- Number of established birth preparedness schools in primary health care facilities
- Percentage of health providers trained on antenatal care

In addition to project described above, the Equity project (2012-2015) was initiated in Osh, Batken and Jalal-Abad provinces after the civic conflict in June 2010. While the previous UNICEF projects have enhanced perinatal care on the secondary hospital level, the ongoing Equity project operates mainly on the primary health care level. High maternal and newborn mortality rates are being tackled by improving equitable access to health care services through capacity building of medical workers and procurement of life-saving equipment as well as increasing the demand through community mobilization. Some activities, for example investments in temperature management of maternity wards and improvement of water and sewage systems have been implemented on the territorial hospitals that are pilot sites of the DaO project and therefore, will be included in the evaluation.

2.3 PROJECT PARTNERS:
Main Project partners are MoH including Mother and Child Health Department, National Center of Mother and Child Health, National Health Promotion Center, Kyrgyz Medical Academy, Postgraduate University, UNFPA, WHO, GIZ, USAID, University Murcia in Spain, KAON, Kyrgyz Association of Perinatologists, Kyrgyz Midwives Association, Hospital Association in KR, health facilities, VHCS

2.4 PROJECT BENEFICIARIES:
Main project beneficiaries are:
- Pregnant women
- Women in delivery
- Newborns
- Medical personnel
- EPC and Safe Motherhood National Trainers
- Professional NGOs

2.5 PROJECT DURATION
UNICEF jointly with UNFPA, WHO (only for the first year of the project) and MoH implemented the project for the period of 2010-2013.
CHAPTER 3: EVALUATION PURPOSE, OBJECTIVES AND METHODOLOGY
CHAPTER 3: EVALUATION PURPOSE, OBJECTIVES AND METHODOLOGY

3.1 EVALUATION OBJECTIVES

UNICEF commissioned the evaluation of DaO project as UNICEF Country Programme (2012-2016) is reaching the midpoint. The evaluation will give an opportunity to look in more detail at project design and implementation progress, assess the relevance of the UNICEF perinatal care programme and weight the achieved results as well as specify remaining challenges and recommend necessary corrections for the remaining three years of the Country Programme.

The purpose of the evaluation was to document and increase the knowledge of results, good practices and lessons learnt in perinatal care with specific recommendations. It also specifies UNICEF’s contribution to enhancing maternal and child health care system, quality of care and maternal and child survival in the country as well as determines whether UNICEF pilot projects have been effective and should be scaled up countrywide. In addition to UNICEF Country Office, other UN Agencies and development partners as well as the Ministry of Health will benefit from the evaluation in planning, implementing and coordinating perinatal care.

OVERALL OBJECTIVE OF MID-TERM EVALUATION

Overall objective of the evaluation is to support Kyrgyzstan in its efforts to reduce perinatal mortality and to meet the targets of MDGs and beyond by strengthening the implementation of the National Perinatal Care Programme for 2008-2017.

SPECIFIC OBJECTIVES OF FINAL EVALUATION

Specific objective of MTR Evaluation is to generate knowledge on achieved results and shortcomings of the UNICEF programme on perinatal care as well as to produce specific recommendations to set further priorities, strategies and interventions.

The project evaluation findings and recommendations are expected to generate the following benefits:

- The evaluation will contribute to the global knowledge evidence base on child mortality and morbidity reduction.
- The findings and recommendations of this evaluation will primarily be addressed with policy makers and programme managers, both internally in UNICEF and externally in governments, partner organizations, professional associations and academia.
- A better documentation of results achieved and identification of most effective strategies and interventions should also contribute to mobilizing additional funding for achieving further reduction of avoidable maternal and child deaths.
- The results of the evaluation will further inform and influence the development of UNICEF supported programme of cooperation.
- The evaluation will also document lessons learned, which have contributed to formulating policies to support further progress in reducing infant and child mortality and morbidity, thus contribute to the “A Promise Renewed Initiative”.

3.2 SCOPE OF THE EVALUATION

The evaluation focused on assessing the project’s current and potential contribution to the improvement of MCH health indicators in Kyrgyzstan. Each evaluation criterion was analyzed from the perspective of assessing the implications of project activities on:

- **Final beneficiaries**: women and children;
- **Service providers**: health care professionals whose capacity has been built (including doctors, midwives, and health facility managers);
- **Sub-national decision-making level**: Regional health authorities (local governments);
- **National decision-making level**: national health authorities and key stakeholders (Ministry of Health and Department heads, Education institutions, Health Statistics Department, International Development and Implementing Partners, etc.)

The evaluation examined the relevance, effectiveness, efficiency and sustainability of the UNICEF’s contribution for which the OECD DAC evaluation approach has been applied.

3.3 EVALUATION PROCESS

The evaluation was implemented in three phases.

**Phase 1: Design phase (November, 2013)** - The Evaluation Team (ET) conducted desk review and prepared detailed evaluation, design which included stake-

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holder mapping (key informants), evaluation and results frameworks, interview and focused group discussion guides, observation and criterion based audit checklists as well as a detailed plan for data collection, including selection of project sites and beneficiaries.

**Phase 2: Field phase (December 2013)** – An evaluation team (ET) visited the country in the period of December 1-17, 2013 and completed qualitative and quantitative data collection from project targeted oblasts Osh and Batken. The team visited 1 Tertiary Level Maternity, 2 Secondary Level Maternities and 2 primary level maternities, as well as Family Medicine Center in Batken and Kyzylkya. In this phase the ET used different evaluation tools, such as Semi-structured Interviews (SSI) with key stakeholders, Focused Group Discussions (FGD) with direct beneficiaries (women and medical personnel) in each visited health facility; direct observation of the service provision; as well as reviewed selected Medical Cards from 2010 and 2013 using Criterion Based Audit Check-list (CBA). All these methods allowed to assess changes in application of the EPC technologies, change of management and service organization, service quality and infection control, record keeping as well as improvement in infrastructure, equipment and drug supply.

At the end of the evaluation mission, the team presented preliminary findings and recommendations to the key stakeholder from MOH and UNICEF to validate preliminary findings and recommendations and collect initial comments.

**Phase 3: Reporting phase (December 2013 – January 2014)** - In this phase the evaluation team prepared the draft evaluation report which went through formal review process and incorporated recommendations and comments provided by the reviewers into the final evaluation report.

**3.4 Evaluation Methodology and Data Sources**

As described above, the methodology comprised a mix of site visits and observations, face-to-face semi structured interviews, focus group discussions, criterion-based audit of medical records, desk-based research and review of existing reports, documents and available secondary data.

The six major sources of data were used during the Evaluation.

- **PEOPLE** Individuals were consulted through individual (semi-structured) interviews and focus groups;
- **SITE VISITS**: Data collected during the visits to selected project sites;
- **DOCUMENTS**: All project and thematic area related documents (primary and secondary data sources)

were reviewed.

**Observations**: Qualitative data was collected during observation of service delivery at the visited facilities.

**Criterion Based Audit** Data collected through clinical audit of the patient medical cards.

**Quantitative Analysis**: The ET utilized quantitative analysis to examine changes in selected but comparable indicators from available data (quantitative facility statistics, monitoring data, researches and studies, etc.).

**3.5 Evaluation Limitations**

Evaluation was largely limited due to the non-standardized financial, human resource and quality of care data collection by hospitals at different level of the perinatal care system. Thus in order to collect required data, the ET had to work with available row data, analyze and present findings.

Unwillingness of few providers as well as women during the delivery, limited ET members to observe service provision patterns, particularly deliveries, in two delivery cases taking place in the facility during the ET visit. However, the evaluation experts are confident, that information derived through observation is sufficient to draw conclusions.

**3.6 Participatory Approach**

In order to develop ownership and ensure the involvement and interest of the stakeholders for sustainable changes and future developments, the evaluation was conducted in a participatory way. The team of international experts was joined with UNICEF national consultant and two national experts (Ob/Gyn and Pediatrician).

The evaluation findings and recommendations have been presented and verified at MOH and UNICEF stakeholders meetings before final version of the report was produced. Comments, suggestions and clarifications provided by the stakeholders were adequately addressed in the evaluation report. Moreover, initial draft of the report was shared for comments and feedback received is reflected in the final report.

**3.7 Ethical Issues**

The ET considered ethical issues and applied the following approaches:

1. Kept evaluation procedures (FGD and SSI) as brief and convenient as possible to minimize disruptions in respondents work process;
2. Ensured that potential participant made an informed decision by informing about the purpose of evaluation and final outcome; explaining the process and duration of interview and/or FGD. The ET also ensured respondents about the confidentiality of the source for obtained information and allow them to retain from answering the questions posed in case they felt uncomfortable to respond;

3. Key informants have been interviewed face to face without presence of other individuals. As for the FGD, to encourage open discussion around the evaluation questions the grouping was applied by avoiding presence of their superiors. The FGDs were held separately for each target beneficiary group.

4. Information was analyzed and findings reported accurately and impartially.
CHAPTER 4: EVALUATION FINDINGS
CHAPTER 4: EVALUATION FINDINGS

4.1 RELEVANCE

This section examines relevance and design of the project interventions to address the prenatal care problems at all levels of health care system and summarizes the information derived from the desk review and key informant interviews. Evaluation findings presented below are structured in a way to provide answers to the questions outlined for the given criterion in the Box 1 and Evaluation Framework.

Box 1: Evaluation Questions

- How the project fits to wider context of MCH in the Kyrgyz Republic?
- To what extent the project objectives and achievements are consistent with the national priorities?
- To what extent the project objectives and achievements are consistent with the MDG4 and MDGs?
- To what extent the project objectives and achievements respond to needs of the service providers and final beneficiaries?
- In what extent the project outcomes address key issues, their underlying causes and challenges?
- What is the appropriateness of the design, are the targets and indicators relevant?
- How has the project been implemented? How does it take into account other projects in the region?

Relevance of UNICEF project to national priorities was evaluated based on following two criteria and results are presented in Figure 1 below: i) Relevance of project-specific objectives to the priorities declared in the national policy documents; and ii) Relevance of project-specific objectives to the priority health problems of the population as evidenced by the available epidemiological data.

**DAO PROJECT**

This Joint Project, implemented by UNFPA, UNICEF and WHO, aims at reduction of perinatal mortality in the Kyrgyz Republic through enhancement of equitable access to health care services of the poor and vulnerable groups by improving the quality of maternal and newborn care and monitoring data in selected maternity hospitals.

Den Sooluk’s expected maternal health care outcomes:

- 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
- Reduction of child mortality from respiratory diseases in children under 5 down to 7% by 2016
- Reduction of child mortality from diarrhea in children under 5 down to 7% by 2016
- does it take into account other projects in the region?

The project supports the priorities set out in the Kyrgyz Republic “Den Sooluk” National Health Reform Programme and other national programme documents. The relevance of the DaO project to the national priorities is schematically represented in the Figure 1 below.

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 new reform 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. It’s underlying principles include: People-oriented; Results-oriented; Elimination of systemic barriers to health promotion and Sector Wide Approach (SWAP).
Figure 1: Project relevance to national priorities

**MDG 4 & MDG 5**

**DEN SOOLUK HEALTH REFORM PROGRAMME**

**OBJECTIVE:** Improve obstetric care through provision of individual services and access to quality health services at all levels of an integrated perinatal care system.

**UNICEF CPAP**

**OBJECTIVE:** An increase in the number of women and children from poor and vulnerable families who have access to priority lifesaving health services.

**NATIONAL PERINATAL CARE STRATEGY**

**Objective 1:** Building a multi level system of perinatal/neonatal care.

**Objective 2:** Establishment of transportation/counseling system.

**Objective 3:** Perinatal care quality improvement through improvement of professional knowledge and practical skills of the health professionals.

**Objective 4:** Development of monitoring and evaluation system (audit) for perinatal/neonatal care quality.

**Objective 5:** Establishment of differentiated payment system for perinatal care based on different level of package of services, depending on risk or severity of a case.

**DoO:**

**EQUITY PROJECT**

**Objective:** Achieve MDG 4 & MDG 5 through institutionalization of the continuous quality improvement of medical services for women and children.

**Output 1:** Significant increase in child and family welfare among targeted poorest families and communities by increasing access to services.

- **Elaboration, printing and dissemination of clinical guideline**
- **Integration of PMTCT into the Perinatal Care system**
- **Provision of life saving basic equipment**
- **Training of medical staff at maternities**
- **CQ Evaluation, monitoring**
- **Maternal and Newborn Registers**

- **Elaboration, printing and dissemination of clinical guidelines**
- **Capacity development of medical staff at Maternities and PHC level**
- **Community mobilization through Village Health Committees**
- **Provision of life saving basic equipment**
- **improving the infrastructure, such as temperature management, installment of water and sewage systems in health facilities**
- **CQ Evaluation, monitoring on EPC/NRT/IMCI at PHC and Hospital Level**